

### GENERAL DESCRIPTION

The SGM41102/SGM41102A is designed for primary protection of Li-Ion/polymer rechargeable cells. The product integrates all the protections required for safe operation of polymer rechargeable cells. The device is packaged in a tiny and thin package. Its small solution size leaves more space for fitting the battery cell into a given cavity for small size wearable devices.

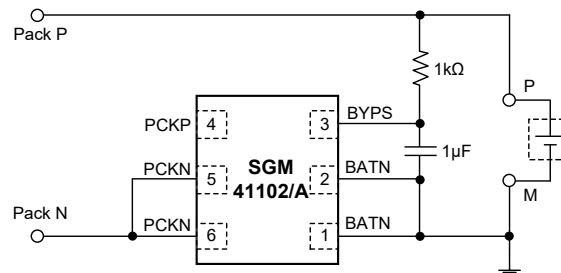
The SGM41102/SGM41102A integrates all the protections and the required low on-resistance disconnect switch on one die. The protection features include charge and discharge protection, detection and protection of a cell in over-charge, over-discharge, over-current, and battery under-voltage. The product also disconnects the battery pack in the case of deep discharge.

The SGM41102/SGM41102A operates in -40°C to +85°C temperature range, and is in a thin and low profile UTDFN-1.5×2-6L package. This package with a nominal height of 0.5mm is convenient for small cell packing designs.

### APPLICATIONS

- IoT Gadgets
- Wearable Devices
- Battery Packs

### TYPICAL APPLICATION



NOTE: The short-circuit of both ends (P and M) of the battery should be avoided during the battery assembly process.

**Figure 1. Typical Application Circuit**

### FEATURES

- Ultra-Compact Protection Solution
- Pass Resistance: 43mΩ (TYP)
- Operation Current: 1.8μA (TYP)
- Factory Programmable OVP Threshold Options  
4.20V to 4.575V with 0.025V per Step
- Over-Charge/Discharge Current Protection  
4 Thresholds Combination Options
- Over-Discharge Current Protection Selection
  - ◆ SGM41102: One Time Latch when OCD Trigger
  - ◆ SGM41102A: Continue Retry to Detect Loading Recovery
- Battery Under-Voltage Protection  
2.6V/2.7V/2.8V/3.0V Options
- 50nA Deep Discharge Shutdown
- 0V Battery Charging
- Input Surge Clamping
- Input Over-Voltage Safe
- Load Short-Circuit Safe
- Reverse Polarity Battery Safe
- Input Reversed-Attaching Safe
- Battery Pack Paralleling Safe
- Locked-Off for Delivery/Assembly
- Available in a Green UTDFN-1.5×2-6L Package

**PACKAGE/ORDERING INFORMATION**

MODEL	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM41102-420M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-420M03YUDT6G/TR	RPF XXX	Tape and Reel, 3000
SGM41102-420M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-420M04YUDT6G/TR	RQ0 XXX	Tape and Reel, 3000
SGM41102-420M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-420M05YUDT6G/TR	RQ1 XXX	Tape and Reel, 3000
SGM41102-420M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-420M06YUDT6G/TR	RQ2 XXX	Tape and Reel, 3000
SGM41102-420Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-420Q03YUDT6G/TR	RQ3 XXX	Tape and Reel, 3000
SGM41102-420Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-420Q04YUDT6G/TR	RQ4 XXX	Tape and Reel, 3000
SGM41102-420Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-420Q05YUDT6G/TR	RQ5 XXX	Tape and Reel, 3000
SGM41102-420Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-420Q06YUDT6G/TR	RQ6 XXX	Tape and Reel, 3000
SGM41102-420O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-420O03YUDT6G/TR	RQ7 XXX	Tape and Reel, 3000
SGM41102-420O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-420O04YUDT6G/TR	RQ8 XXX	Tape and Reel, 3000
SGM41102-420O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-420O05YUDT6G/TR	RQ9 XXX	Tape and Reel, 3000
SGM41102-420O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-420O06YUDT6G/TR	RQA XXX	Tape and Reel, 3000
SGM41102-420P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-420P03YUDT6G/TR	RQB XXX	Tape and Reel, 3000
SGM41102-420P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-420P04YUDT6G/TR	RQC XXX	Tape and Reel, 3000
SGM41102-420P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-420P05YUDT6G/TR	RQD XXX	Tape and Reel, 3000
SGM41102-420P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-420P06YUDT6G/TR	RQE XXX	Tape and Reel, 3000
SGM41102-423M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-423M03YUDT6G/TR	RQF XXX	Tape and Reel, 3000
SGM41102-423M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-423M04YUDT6G/TR	RR0 XXX	Tape and Reel, 3000
SGM41102-423M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-423M05YUDT6G/TR	RR1 XXX	Tape and Reel, 3000
SGM41102-423M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-423M06YUDT6G/TR	RR2 XXX	Tape and Reel, 3000
SGM41102-423Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-423Q03YUDT6G/TR	RR3 XXX	Tape and Reel, 3000
SGM41102-423Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-423Q04YUDT6G/TR	RR4 XXX	Tape and Reel, 3000
SGM41102-423Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-423Q05YUDT6G/TR	RR5 XXX	Tape and Reel, 3000
SGM41102-423Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-423Q06YUDT6G/TR	RR6 XXX	Tape and Reel, 3000
SGM41102-423O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-423O03YUDT6G/TR	RR7 XXX	Tape and Reel, 3000
SGM41102-423O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-423O04YUDT6G/TR	RR8 XXX	Tape and Reel, 3000

# SGM41102/SGM41102A

# True Monolithic Li-Ion/Polymer Battery Protector in Tiny Thin Package

MODEL	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM41102-423O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-423O05YUDT6G/TR	RR9 XXX	Tape and Reel, 3000
SGM41102-423O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-423O06YUDT6G/TR	RRA XXX	Tape and Reel, 3000
SGM41102-423P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-423P03YUDT6G/TR	RRB XXX	Tape and Reel, 3000
SGM41102-423P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-423P04YUDT6G/TR	RRC XXX	Tape and Reel, 3000
SGM41102-423P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-423P05YUDT6G/TR	RRD XXX	Tape and Reel, 3000
SGM41102-423P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-423P06YUDT6G/TR	RRE XXX	Tape and Reel, 3000
SGM41102-425M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-425M03YUDT6G/TR	RRF XXX	Tape and Reel, 3000
SGM41102-425M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-425M04YUDT6G/TR	RS0 XXX	Tape and Reel, 3000
SGM41102-425M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-425M05YUDT6G/TR	RS1 XXX	Tape and Reel, 3000
SGM41102-425M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-425M06YUDT6G/TR	RS2 XXX	Tape and Reel, 3000
SGM41102-425Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-425Q03YUDT6G/TR	RS3 XXX	Tape and Reel, 3000
SGM41102-425Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-425Q04YUDT6G/TR	RS4 XXX	Tape and Reel, 3000
SGM41102-425Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-425Q05YUDT6G/TR	RS5 XXX	Tape and Reel, 3000
SGM41102-425Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-425Q06YUDT6G/TR	RS6 XXX	Tape and Reel, 3000
SGM41102-425O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-425O03YUDT6G/TR	RS7 XXX	Tape and Reel, 3000
SGM41102-425O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-425O04YUDT6G/TR	RS8 XXX	Tape and Reel, 3000
SGM41102-425O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-425O05YUDT6G/TR	RS9 XXX	Tape and Reel, 3000
SGM41102-425O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-425O06YUDT6G/TR	RSA XXX	Tape and Reel, 3000
SGM41102-425P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-425P03YUDT6G/TR	RSB XXX	Tape and Reel, 3000
SGM41102-425P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-425P04YUDT6G/TR	RSC XXX	Tape and Reel, 3000
SGM41102-425P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-425P05YUDT6G/TR	RSD XXX	Tape and Reel, 3000
SGM41102-425P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-425P06YUDT6G/TR	RSE XXX	Tape and Reel, 3000
SGM41102-428M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-428M03YUDT6G/TR	RSF XXX	Tape and Reel, 3000
SGM41102-428M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-428M04YUDT6G/TR	RT0 XXX	Tape and Reel, 3000
SGM41102-428M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-428M05YUDT6G/TR	RT1 XXX	Tape and Reel, 3000
SGM41102-428M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-428M06YUDT6G/TR	RT2 XXX	Tape and Reel, 3000
SGM41102-428Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-428Q03YUDT6G/TR	RT3 XXX	Tape and Reel, 3000

# SGM41102/SGM41102A

# True Monolithic Li-Ion/Polymer Battery Protector in Tiny Thin Package

MODEL	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM41102-428Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-428Q04YUDT6G/TR	RT4 XXX	Tape and Reel, 3000
SGM41102-428Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-428Q05YUDT6G/TR	RT5 XXX	Tape and Reel, 3000
SGM41102-428Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-428Q06YUDT6G/TR	RT6 XXX	Tape and Reel, 3000
SGM41102-428O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-428O03YUDT6G/TR	RT7 XXX	Tape and Reel, 3000
SGM41102-428O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-428O04YUDT6G/TR	RT8 XXX	Tape and Reel, 3000
SGM41102-428O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-428O05YUDT6G/TR	RT9 XXX	Tape and Reel, 3000
SGM41102-428O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-428O06YUDT6G/TR	RTA XXX	Tape and Reel, 3000
SGM41102-428P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-428P03YUDT6G/TR	RTB XXX	Tape and Reel, 3000
SGM41102-428P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-428P04YUDT6G/TR	RTC XXX	Tape and Reel, 3000
SGM41102-428P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-428P05YUDT6G/TR	RTD XXX	Tape and Reel, 3000
SGM41102-428P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-428P06YUDT6G/TR	RTE XXX	Tape and Reel, 3000
SGM41102-430M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-430M03YUDT6G/TR	RTF XXX	Tape and Reel, 3000
SGM41102-430M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-430M04YUDT6G/TR	RU0 XXX	Tape and Reel, 3000
SGM41102-430M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-430M05YUDT6G/TR	RU1 XXX	Tape and Reel, 3000
SGM41102-430M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-430M06YUDT6G/TR	RU2 XXX	Tape and Reel, 3000
SGM41102-430Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-430Q03YUDT6G/TR	RU3 XXX	Tape and Reel, 3000
SGM41102-430Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-430Q04YUDT6G/TR	RU4 XXX	Tape and Reel, 3000
SGM41102-430Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-430Q05YUDT6G/TR	RU5 XXX	Tape and Reel, 3000
SGM41102-430Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-430Q06YUDT6G/TR	RU6 XXX	Tape and Reel, 3000
SGM41102-430O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-430O03YUDT6G/TR	RU7 XXX	Tape and Reel, 3000
SGM41102-430O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-430O04YUDT6G/TR	RU8 XXX	Tape and Reel, 3000
SGM41102-430O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-430O05YUDT6G/TR	RU9 XXX	Tape and Reel, 3000
SGM41102-430O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-430O06YUDT6G/TR	RUA XXX	Tape and Reel, 3000
SGM41102-430P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-430P03YUDT6G/TR	RUB XXX	Tape and Reel, 3000
SGM41102-430P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-430P04YUDT6G/TR	RUC XXX	Tape and Reel, 3000
SGM41102-430P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-430P05YUDT6G/TR	RUD XXX	Tape and Reel, 3000
SGM41102-430P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-430P06YUDT6G/TR	RUE XXX	Tape and Reel, 3000

# SGM41102/SGM41102A

# True Monolithic Li-Ion/Polymer Battery Protector in Tiny Thin Package

MODEL	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM41102-433M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-433M03YUDT6G/TR	RUF XXX	Tape and Reel, 3000
SGM41102-433M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-433M04YUDT6G/TR	RV0 XXX	Tape and Reel, 3000
SGM41102-433M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-433M05YUDT6G/TR	RV1 XXX	Tape and Reel, 3000
SGM41102-433M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-433M06YUDT6G/TR	RV2 XXX	Tape and Reel, 3000
SGM41102-433Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-433Q03YUDT6G/TR	RV3 XXX	Tape and Reel, 3000
SGM41102-433Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-433Q04YUDT6G/TR	RV4 XXX	Tape and Reel, 3000
SGM41102-433Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-433Q05YUDT6G/TR	RV5 XXX	Tape and Reel, 3000
SGM41102-433Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-433Q06YUDT6G/TR	RV6 XXX	Tape and Reel, 3000
SGM41102-433O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-433O03YUDT6G/TR	RV7 XXX	Tape and Reel, 3000
SGM41102-433O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-433O04YUDT6G/TR	RV8 XXX	Tape and Reel, 3000
SGM41102-433O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-433O05YUDT6G/TR	RV9 XXX	Tape and Reel, 3000
SGM41102-433O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-433O06YUDT6G/TR	RVA XXX	Tape and Reel, 3000
SGM41102-433P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-433P03YUDT6G/TR	RVB XXX	Tape and Reel, 3000
SGM41102-433P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-433P04YUDT6G/TR	RVC XXX	Tape and Reel, 3000
SGM41102-433P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-433P05YUDT6G/TR	RVD XXX	Tape and Reel, 3000
SGM41102-433P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-433P06YUDT6G/TR	RVE XXX	Tape and Reel, 3000
SGM41102-435M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-435M03YUDT6G/TR	RVF XXX	Tape and Reel, 3000
SGM41102-435M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-435M04YUDT6G/TR	RW0 XXX	Tape and Reel, 3000
SGM41102-435M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-435M05YUDT6G/TR	RW1 XXX	Tape and Reel, 3000
SGM41102-435M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-435M06YUDT6G/TR	RW2 XXX	Tape and Reel, 3000
SGM41102-435Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-435Q03YUDT6G/TR	RW3 XXX	Tape and Reel, 3000
SGM41102-435Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-435Q04YUDT6G/TR	RW4 XXX	Tape and Reel, 3000
SGM41102-435Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-435Q05YUDT6G/TR	RW5 XXX	Tape and Reel, 3000
SGM41102-435Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-435Q06YUDT6G/TR	RW6 XXX	Tape and Reel, 3000
SGM41102-435O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-435O03YUDT6G/TR	RW7 XXX	Tape and Reel, 3000
SGM41102-435O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-435O04YUDT6G/TR	RW8 XXX	Tape and Reel, 3000
SGM41102-435O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-435O05YUDT6G/TR	RW9 XXX	Tape and Reel, 3000

# SGM41102/SGM41102A

# True Monolithic Li-Ion/Polymer Battery Protector in Tiny Thin Package

MODEL	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM41102-435O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-435O06YUDT6G/TR	RWA XXX	Tape and Reel, 3000
SGM41102-435P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-435P03YUDT6G/TR	RWB XXX	Tape and Reel, 3000
SGM41102-435P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-435P04YUDT6G/TR	RWC XXX	Tape and Reel, 3000
SGM41102-435P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-435P05YUDT6G/TR	RWD XXX	Tape and Reel, 3000
SGM41102-435P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-435P06YUDT6G/TR	RWE XXX	Tape and Reel, 3000
SGM41102-438M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-438M03YUDT6G/TR	RWF XXX	Tape and Reel, 3000
SGM41102-438M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-438M04YUDT6G/TR	RX0 XXX	Tape and Reel, 3000
SGM41102-438M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-438M05YUDT6G/TR	RX1 XXX	Tape and Reel, 3000
SGM41102-438M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-438M06YUDT6G/TR	RX2 XXX	Tape and Reel, 3000
SGM41102-438Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-438Q03YUDT6G/TR	RX3 XXX	Tape and Reel, 3000
SGM41102-438Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-438Q04YUDT6G/TR	RX4 XXX	Tape and Reel, 3000
SGM41102-438Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-438Q05YUDT6G/TR	RX5 XXX	Tape and Reel, 3000
SGM41102-438Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-438Q06YUDT6G/TR	RX6 XXX	Tape and Reel, 3000
SGM41102-438O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-438O03YUDT6G/TR	RX7 XXX	Tape and Reel, 3000
SGM41102-438O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-438O04YUDT6G/TR	RX8 XXX	Tape and Reel, 3000
SGM41102-438O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-438O05YUDT6G/TR	RX9 XXX	Tape and Reel, 3000
SGM41102-438O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-438O06YUDT6G/TR	RXA XXX	Tape and Reel, 3000
SGM41102-438P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-438P03YUDT6G/TR	RXB XXX	Tape and Reel, 3000
SGM41102-438P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-438P04YUDT6G/TR	RXC XXX	Tape and Reel, 3000
SGM41102-438P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-438P05YUDT6G/TR	RXD XXX	Tape and Reel, 3000
SGM41102-438P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-438P06YUDT6G/TR	RXE XXX	Tape and Reel, 3000
SGM41102-440M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-440M03YUDT6G/TR	RXF XXX	Tape and Reel, 3000
SGM41102-440M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-440M04YUDT6G/TR	RY0 XXX	Tape and Reel, 3000
SGM41102-440M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-440M05YUDT6G/TR	RY1 XXX	Tape and Reel, 3000
SGM41102-440M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-440M06YUDT6G/TR	RY2 XXX	Tape and Reel, 3000
SGM41102-440Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-440Q03YUDT6G/TR	RY3 XXX	Tape and Reel, 3000
SGM41102-440Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-440Q04YUDT6G/TR	RY4 XXX	Tape and Reel, 3000

# SGM41102/SGM41102A

# True Monolithic Li-Ion/Polymer Battery Protector in Tiny Thin Package

MODEL	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM41102-440Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-440Q05YUDT6G/TR	RY5 XXX	Tape and Reel, 3000
SGM41102-440Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-440Q06YUDT6G/TR	RY6 XXX	Tape and Reel, 3000
SGM41102-440O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-440O03YUDT6G/TR	RY7 XXX	Tape and Reel, 3000
SGM41102-440O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-440O04YUDT6G/TR	RY8 XXX	Tape and Reel, 3000
SGM41102-440O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-440O05YUDT6G/TR	RY9 XXX	Tape and Reel, 3000
SGM41102-440O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-440O06YUDT6G/TR	RYA XXX	Tape and Reel, 3000
SGM41102-440P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-440P03YUDT6G/TR	RYB XXX	Tape and Reel, 3000
SGM41102-440P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-440P04YUDT6G/TR	RYC XXX	Tape and Reel, 3000
SGM41102-440P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-440P05YUDT6G/TR	RYD XXX	Tape and Reel, 3000
SGM41102-440P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-440P06YUDT6G/TR	RYE XXX	Tape and Reel, 3000
SGM41102-443M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-443M03YUDT6G/TR	RYF XXX	Tape and Reel, 3000
SGM41102-443M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-443M04YUDT6G/TR	RZ0 XXX	Tape and Reel, 3000
SGM41102-443M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-443M05YUDT6G/TR	RZ1 XXX	Tape and Reel, 3000
SGM41102-443M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-443M06YUDT6G/TR	RZ2 XXX	Tape and Reel, 3000
SGM41102-443Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-443Q03YUDT6G/TR	RZ3 XXX	Tape and Reel, 3000
SGM41102-443Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-443Q04YUDT6G/TR	RZ4 XXX	Tape and Reel, 3000
SGM41102-443Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-443Q05YUDT6G/TR	RZ5 XXX	Tape and Reel, 3000
SGM41102-443Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-443Q06YUDT6G/TR	RZ6 XXX	Tape and Reel, 3000
SGM41102-443O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-443O03YUDT6G/TR	RZ7 XXX	Tape and Reel, 3000
SGM41102-443O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-443O04YUDT6G/TR	RZ8 XXX	Tape and Reel, 3000
SGM41102-443O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-443O05YUDT6G/TR	RZ9 XXX	Tape and Reel, 3000
SGM41102-443O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-443O06YUDT6G/TR	RZA XXX	Tape and Reel, 3000
SGM41102-443P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-443P03YUDT6G/TR	RZB XXX	Tape and Reel, 3000
SGM41102-443P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-443P04YUDT6G/TR	RZC XXX	Tape and Reel, 3000
SGM41102-443P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-443P05YUDT6G/TR	RZD XXX	Tape and Reel, 3000
SGM41102-443P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-443P06YUDT6G/TR	RZE XXX	Tape and Reel, 3000
SGM41102-445M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-445M03YUDT6G/TR	RZF XXX	Tape and Reel, 3000

# SGM41102/SGM41102A

# True Monolithic Li-Ion/Polymer Battery Protector in Tiny Thin Package

MODEL	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM41102-445M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-445M04YUDT6G/TR	O10 XXX	Tape and Reel, 3000
SGM41102-445M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-445M05YUDT6G/TR	O11 XXX	Tape and Reel, 3000
SGM41102-445M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-445M06YUDT6G/TR	O12 XXX	Tape and Reel, 3000
SGM41102-445Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-445Q03YUDT6G/TR	O13 XXX	Tape and Reel, 3000
SGM41102-445Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-445Q04YUDT6G/TR	O14 XXX	Tape and Reel, 3000
SGM41102-445Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-445Q05YUDT6G/TR	O15 XXX	Tape and Reel, 3000
SGM41102-445Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-445Q06YUDT6G/TR	O16 XXX	Tape and Reel, 3000
SGM41102-445O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-445O03YUDT6G/TR	O17 XXX	Tape and Reel, 3000
SGM41102-445O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-445O04YUDT6G/TR	O18 XXX	Tape and Reel, 3000
SGM41102-445O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-445O05YUDT6G/TR	O19 XXX	Tape and Reel, 3000
SGM41102-445O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-445O06YUDT6G/TR	O1A XXX	Tape and Reel, 3000
SGM41102-445P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-445P03YUDT6G/TR	O1B XXX	Tape and Reel, 3000
SGM41102-445P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-445P04YUDT6G/TR	O1C XXX	Tape and Reel, 3000
SGM41102-445P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-445P05YUDT6G/TR	O1D XXX	Tape and Reel, 3000
SGM41102-445P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-445P06YUDT6G/TR	O1E XXX	Tape and Reel, 3000
SGM41102-448M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-448M03YUDT6G/TR	O1F XXX	Tape and Reel, 3000
SGM41102-448M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-448M04YUDT6G/TR	O20 XXX	Tape and Reel, 3000
SGM41102-448M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-448M05YUDT6G/TR	O21 XXX	Tape and Reel, 3000
SGM41102-448M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-448M06YUDT6G/TR	O22 XXX	Tape and Reel, 3000
SGM41102-448Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-448Q03YUDT6G/TR	O23 XXX	Tape and Reel, 3000
SGM41102-448Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-448Q04YUDT6G/TR	O24 XXX	Tape and Reel, 3000
SGM41102-448Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-448Q05YUDT6G/TR	O25 XXX	Tape and Reel, 3000
SGM41102-448Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-448Q06YUDT6G/TR	R4B XXX	Tape and Reel, 3000
SGM41102-448O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-448O03YUDT6G/TR	O26 XXX	Tape and Reel, 3000
SGM41102-448O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-448O04YUDT6G/TR	O27 XXX	Tape and Reel, 3000
SGM41102-448O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-448O05YUDT6G/TR	O28 XXX	Tape and Reel, 3000
SGM41102-448O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-448O06YUDT6G/TR	O29 XXX	Tape and Reel, 3000



# SGM41102/SGM41102A

# True Monolithic Li-Ion/Polymer Battery Protector in Tiny Thin Package

MODEL	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM41102-448P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-448P03YUDT6G/TR	O2A XXX	Tape and Reel, 3000
SGM41102-448P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-448P04YUDT6G/TR	O2B XXX	Tape and Reel, 3000
SGM41102-448P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-448P05YUDT6G/TR	O2C XXX	Tape and Reel, 3000
SGM41102-448P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-448P06YUDT6G/TR	O2D XXX	Tape and Reel, 3000
SGM41102-450M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-450M03YUDT6G/TR	O2E XXX	Tape and Reel, 3000
SGM41102-450M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-450M04YUDT6G/TR	O2F XXX	Tape and Reel, 3000
SGM41102-450M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-450M05YUDT6G/TR	O30 XXX	Tape and Reel, 3000
SGM41102-450M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-450M06YUDT6G/TR	O31 XXX	Tape and Reel, 3000
SGM41102-450Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-450Q03YUDT6G/TR	O32 XXX	Tape and Reel, 3000
SGM41102-450Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-450Q04YUDT6G/TR	O33 XXX	Tape and Reel, 3000
SGM41102-450Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-450Q05YUDT6G/TR	O34 XXX	Tape and Reel, 3000
SGM41102-450Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-450Q06YUDT6G/TR	O35 XXX	Tape and Reel, 3000
SGM41102-450O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-450O03YUDT6G/TR	O36 XXX	Tape and Reel, 3000
SGM41102-450O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-450O04YUDT6G/TR	O37 XXX	Tape and Reel, 3000
SGM41102-450O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-450O05YUDT6G/TR	O38 XXX	Tape and Reel, 3000
SGM41102-450O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-450O06YUDT6G/TR	O39 XXX	Tape and Reel, 3000
SGM41102-450P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-450P03YUDT6G/TR	O3A XXX	Tape and Reel, 3000
SGM41102-450P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-450P04YUDT6G/TR	O3B XXX	Tape and Reel, 3000
SGM41102-450P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-450P05YUDT6G/TR	O3C XXX	Tape and Reel, 3000
SGM41102-450P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-450P06YUDT6G/TR	O3D XXX	Tape and Reel, 3000
SGM41102-453M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-453M03YUDT6G/TR	O3E XXX	Tape and Reel, 3000
SGM41102-453M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-453M04YUDT6G/TR	O3F XXX	Tape and Reel, 3000
SGM41102-453M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-453M05YUDT6G/TR	O40 XXX	Tape and Reel, 3000
SGM41102-453M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-453M06YUDT6G/TR	O41 XXX	Tape and Reel, 3000
SGM41102-453Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-453Q03YUDT6G/TR	O42 XXX	Tape and Reel, 3000
SGM41102-453Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-453Q04YUDT6G/TR	O43 XXX	Tape and Reel, 3000
SGM41102-453Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-453Q05YUDT6G/TR	O44 XXX	Tape and Reel, 3000

# SGM41102/SGM41102A

# True Monolithic Li-Ion/Polymer Battery Protector in Tiny Thin Package

MODEL	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM41102-453Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-453Q06YUDT6G/TR	O45 XXX	Tape and Reel, 3000
SGM41102-453O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-453O03YUDT6G/TR	O46 XXX	Tape and Reel, 3000
SGM41102-453O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-453O04YUDT6G/TR	O47 XXX	Tape and Reel, 3000
SGM41102-453O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-453O05YUDT6G/TR	O48 XXX	Tape and Reel, 3000
SGM41102-453O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-453O06YUDT6G/TR	O49 XXX	Tape and Reel, 3000
SGM41102-453P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-453P03YUDT6G/TR	O4A XXX	Tape and Reel, 3000
SGM41102-453P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-453P04YUDT6G/TR	O4B XXX	Tape and Reel, 3000
SGM41102-453P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-453P05YUDT6G/TR	O4C XXX	Tape and Reel, 3000
SGM41102-453P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-453P06YUDT6G/TR	O4D XXX	Tape and Reel, 3000
SGM41102-455M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-455M03YUDT6G/TR	O4E XXX	Tape and Reel, 3000
SGM41102-455M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-455M04YUDT6G/TR	O4F XXX	Tape and Reel, 3000
SGM41102-455M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-455M05YUDT6G/TR	O50 XXX	Tape and Reel, 3000
SGM41102-455M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-455M06YUDT6G/TR	O51 XXX	Tape and Reel, 3000
SGM41102-455Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-455Q03YUDT6G/TR	O52 XXX	Tape and Reel, 3000
SGM41102-455Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-455Q04YUDT6G/TR	O53 XXX	Tape and Reel, 3000
SGM41102-455Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-455Q05YUDT6G/TR	O54 XXX	Tape and Reel, 3000
SGM41102-455Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-455Q06YUDT6G/TR	O55 XXX	Tape and Reel, 3000
SGM41102-455O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-455O03YUDT6G/TR	O56 XXX	Tape and Reel, 3000
SGM41102-455O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-455O04YUDT6G/TR	O57 XXX	Tape and Reel, 3000
SGM41102-455O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-455O05YUDT6G/TR	O58 XXX	Tape and Reel, 3000
SGM41102-455O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-455O06YUDT6G/TR	O59 XXX	Tape and Reel, 3000
SGM41102-455P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-455P03YUDT6G/TR	O5A XXX	Tape and Reel, 3000
SGM41102-455P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-455P04YUDT6G/TR	O5B XXX	Tape and Reel, 3000
SGM41102-455P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-455P05YUDT6G/TR	O5C XXX	Tape and Reel, 3000
SGM41102-455P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-455P06YUDT6G/TR	O5D XXX	Tape and Reel, 3000
SGM41102-458M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-458M03YUDT6G/TR	O5E XXX	Tape and Reel, 3000
SGM41102-458M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-458M04YUDT6G/TR	O5F XXX	Tape and Reel, 3000

# SGM41102/SGM41102A

# True Monolithic Li-Ion/Polymer Battery Protector in Tiny Thin Package

MODEL	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM41102-458M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-458M05YUDT6G/TR	O60 XXX	Tape and Reel, 3000
SGM41102-458M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-458M06YUDT6G/TR	O61 XXX	Tape and Reel, 3000
SGM41102-458Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-458Q03YUDT6G/TR	O62 XXX	Tape and Reel, 3000
SGM41102-458Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-458Q04YUDT6G/TR	O63 XXX	Tape and Reel, 3000
SGM41102-458Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-458Q05YUDT6G/TR	O64 XXX	Tape and Reel, 3000
SGM41102-458Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-458Q06YUDT6G/TR	O65 XXX	Tape and Reel, 3000
SGM41102-458O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-458O03YUDT6G/TR	O66 XXX	Tape and Reel, 3000
SGM41102-458O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-458O04YUDT6G/TR	O67 XXX	Tape and Reel, 3000
SGM41102-458O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-458O05YUDT6G/TR	O68 XXX	Tape and Reel, 3000
SGM41102-458O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-458O06YUDT6G/TR	O69 XXX	Tape and Reel, 3000
SGM41102-458P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-458P03YUDT6G/TR	O6A XXX	Tape and Reel, 3000
SGM41102-458P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-458P04YUDT6G/TR	O6B XXX	Tape and Reel, 3000
SGM41102-458P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-458P05YUDT6G/TR	O6C XXX	Tape and Reel, 3000
SGM41102-458P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102-458P06YUDT6G/TR	O6D XXX	Tape and Reel, 3000
SGM41102A-420M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-420M03YUDT6G/TR	O70 XXX	Tape and Reel, 3000
SGM41102A-420M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-420M04YUDT6G/TR	O77 XXX	Tape and Reel, 3000
SGM41102A-420M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-420M05YUDT6G/TR	O78 XXX	Tape and Reel, 3000
SGM41102A-420M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-420M06YUDT6G/TR	O79 XXX	Tape and Reel, 3000
SGM41102A-420Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-420Q03YUDT6G/TR	O7A XXX	Tape and Reel, 3000
SGM41102A-420Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-420Q04YUDT6G/TR	O7B XXX	Tape and Reel, 3000
SGM41102A-420Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-420Q05YUDT6G/TR	O7C XXX	Tape and Reel, 3000
SGM41102A-420Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-420Q06YUDT6G/TR	O7D XXX	Tape and Reel, 3000
SGM41102A-420O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-420O03YUDT6G/TR	O7E XXX	Tape and Reel, 3000
SGM41102A-420O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-420O04YUDT6G/TR	O7F XXX	Tape and Reel, 3000
SGM41102A-420O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-420O05YUDT6G/TR	O80 XXX	Tape and Reel, 3000
SGM41102A-420O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-420O06YUDT6G/TR	O81 XXX	Tape and Reel, 3000
SGM41102A-420P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-420P03YUDT6G/TR	O82 XXX	Tape and Reel, 3000

# SGM41102/SGM41102A

# True Monolithic Li-Ion/Polymer Battery Protector in Tiny Thin Package

MODEL	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM41102A-420P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-420P04YUDT6G/TR	O83 XXX	Tape and Reel, 3000
SGM41102A-420P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-420P05YUDT6G/TR	O84 XXX	Tape and Reel, 3000
SGM41102A-420P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-420P06YUDT6G/TR	O85 XXX	Tape and Reel, 3000
SGM41102A-423M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-423M03YUDT6G/TR	O86 XXX	Tape and Reel, 3000
SGM41102A-423M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-423M04YUDT6G/TR	O87 XXX	Tape and Reel, 3000
SGM41102A-423M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-423M05YUDT6G/TR	O88 XXX	Tape and Reel, 3000
SGM41102A-423M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-423M06YUDT6G/TR	O89 XXX	Tape and Reel, 3000
SGM41102A-423Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-423Q03YUDT6G/TR	O8A XXX	Tape and Reel, 3000
SGM41102A-423Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-423Q04YUDT6G/TR	O8B XXX	Tape and Reel, 3000
SGM41102A-423Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-423Q05YUDT6G/TR	O8C XXX	Tape and Reel, 3000
SGM41102A-423Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-423Q06YUDT6G/TR	O8D XXX	Tape and Reel, 3000
SGM41102A-423O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-423O03YUDT6G/TR	O8E XXX	Tape and Reel, 3000
SGM41102A-423O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-423O04YUDT6G/TR	O8F XXX	Tape and Reel, 3000
SGM41102A-423O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-423O05YUDT6G/TR	O90 XXX	Tape and Reel, 3000
SGM41102A-423O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-423O06YUDT6G/TR	O91 XXX	Tape and Reel, 3000
SGM41102A-423P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-423P03YUDT6G/TR	O92 XXX	Tape and Reel, 3000
SGM41102A-423P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-423P04YUDT6G/TR	O93 XXX	Tape and Reel, 3000
SGM41102A-423P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-423P05YUDT6G/TR	O94 XXX	Tape and Reel, 3000
SGM41102A-423P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-423P06YUDT6G/TR	O95 XXX	Tape and Reel, 3000
SGM41102A-425M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-425M03YUDT6G/TR	O96 XXX	Tape and Reel, 3000
SGM41102A-425M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-425M04YUDT6G/TR	O97 XXX	Tape and Reel, 3000
SGM41102A-425M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-425M05YUDT6G/TR	O98 XXX	Tape and Reel, 3000
SGM41102A-425M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-425M06YUDT6G/TR	O99 XXX	Tape and Reel, 3000
SGM41102A-425Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-425Q03YUDT6G/TR	O9A XXX	Tape and Reel, 3000
SGM41102A-425Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-425Q04YUDT6G/TR	O9B XXX	Tape and Reel, 3000
SGM41102A-425Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-425Q05YUDT6G/TR	O9C XXX	Tape and Reel, 3000
SGM41102A-425Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-425Q06YUDT6G/TR	O9D XXX	Tape and Reel, 3000

# SGM41102/SGM41102A

# True Monolithic Li-Ion/Polymer Battery Protector in Tiny Thin Package

MODEL	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM41102A-425O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-425O03YUDT6G/TR	O9E XXX	Tape and Reel, 3000
SGM41102A-425O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-425O04YUDT6G/TR	O9F XXX	Tape and Reel, 3000
SGM41102A-425O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-425O05YUDT6G/TR	OA0 XXX	Tape and Reel, 3000
SGM41102A-425O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-425O06YUDT6G/TR	OA1 XXX	Tape and Reel, 3000
SGM41102A-425P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-425P03YUDT6G/TR	OA2 XXX	Tape and Reel, 3000
SGM41102A-425P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-425P04YUDT6G/TR	OA3 XXX	Tape and Reel, 3000
SGM41102A-425P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-425P05YUDT6G/TR	OA4 XXX	Tape and Reel, 3000
SGM41102A-425P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-425P06YUDT6G/TR	OA5 XXX	Tape and Reel, 3000
SGM41102A-428M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-428M03YUDT6G/TR	OA6 XXX	Tape and Reel, 3000
SGM41102A-428M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-428M04YUDT6G/TR	OA7 XXX	Tape and Reel, 3000
SGM41102A-428M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-428M05YUDT6G/TR	OA8 XXX	Tape and Reel, 3000
SGM41102A-428M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-428M06YUDT6G/TR	OA9 XXX	Tape and Reel, 3000
SGM41102A-428Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-428Q03YUDT6G/TR	OAA XXX	Tape and Reel, 3000
SGM41102A-428Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-428Q04YUDT6G/TR	OAB XXX	Tape and Reel, 3000
SGM41102A-428Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-428Q05YUDT6G/TR	OAC XXX	Tape and Reel, 3000
SGM41102A-428Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-428Q06YUDT6G/TR	OAD XXX	Tape and Reel, 3000
SGM41102A-428O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-428O03YUDT6G/TR	OAE XXX	Tape and Reel, 3000
SGM41102A-428O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-428O04YUDT6G/TR	OAF XXX	Tape and Reel, 3000
SGM41102A-428O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-428O05YUDT6G/TR	OB0 XXX	Tape and Reel, 3000
SGM41102A-428O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-428O06YUDT6G/TR	OB1 XXX	Tape and Reel, 3000
SGM41102A-428P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-428P03YUDT6G/TR	OB2 XXX	Tape and Reel, 3000
SGM41102A-428P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-428P04YUDT6G/TR	OB3 XXX	Tape and Reel, 3000
SGM41102A-428P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-428P05YUDT6G/TR	OB4 XXX	Tape and Reel, 3000
SGM41102A-428P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-428P06YUDT6G/TR	OB5 XXX	Tape and Reel, 3000
SGM41102A-430M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-430M03YUDT6G/TR	OB6 XXX	Tape and Reel, 3000
SGM41102A-430M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-430M04YUDT6G/TR	OB7 XXX	Tape and Reel, 3000
SGM41102A-430M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-430M05YUDT6G/TR	OB8 XXX	Tape and Reel, 3000

# SGM41102/SGM41102A

# True Monolithic Li-Ion/Polymer Battery Protector in Tiny Thin Package

MODEL	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM41102A-430M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-430M06YUDT6G/TR	OB9 XXX	Tape and Reel, 3000
SGM41102A-430Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-430Q03YUDT6G/TR	OBA XXX	Tape and Reel, 3000
SGM41102A-430Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-430Q04YUDT6G/TR	OBB XXX	Tape and Reel, 3000
SGM41102A-430Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-430Q05YUDT6G/TR	OBC XXX	Tape and Reel, 3000
SGM41102A-430Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-430Q06YUDT6G/TR	OBD XXX	Tape and Reel, 3000
SGM41102A-430O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-430O03YUDT6G/TR	OBE XXX	Tape and Reel, 3000
SGM41102A-430O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-430O04YUDT6G/TR	OBF XXX	Tape and Reel, 3000
SGM41102A-430O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-430O05YUDT6G/TR	OC0 XXX	Tape and Reel, 3000
SGM41102A-430O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-430O06YUDT6G/TR	O71 XXX	Tape and Reel, 3000
SGM41102A-430P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-430P03YUDT6G/TR	OC1 XXX	Tape and Reel, 3000
SGM41102A-430P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-430P04YUDT6G/TR	OC2 XXX	Tape and Reel, 3000
SGM41102A-430P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-430P05YUDT6G/TR	OC3 XXX	Tape and Reel, 3000
SGM41102A-430P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-430P06YUDT6G/TR	OC4 XXX	Tape and Reel, 3000
SGM41102A-433M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-433M03YUDT6G/TR	OC5 XXX	Tape and Reel, 3000
SGM41102A-433M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-433M04YUDT6G/TR	OC6 XXX	Tape and Reel, 3000
SGM41102A-433M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-433M05YUDT6G/TR	OC7 XXX	Tape and Reel, 3000
SGM41102A-433M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-433M06YUDT6G/TR	OC8 XXX	Tape and Reel, 3000
SGM41102A-433Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-433Q03YUDT6G/TR	OC9 XXX	Tape and Reel, 3000
SGM41102A-433Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-433Q04YUDT6G/TR	OCA XXX	Tape and Reel, 3000
SGM41102A-433Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-433Q05YUDT6G/TR	OCB XXX	Tape and Reel, 3000
SGM41102A-433Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-433Q06YUDT6G/TR	OCC XXX	Tape and Reel, 3000
SGM41102A-433O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-433O03YUDT6G/TR	OCD XXX	Tape and Reel, 3000
SGM41102A-433O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-433O04YUDT6G/TR	OCE XXX	Tape and Reel, 3000
SGM41102A-433O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-433O05YUDT6G/TR	OCF XXX	Tape and Reel, 3000
SGM41102A-433O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-433O06YUDT6G/TR	OD0 XXX	Tape and Reel, 3000
SGM41102A-433P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-433P03YUDT6G/TR	OD1 XXX	Tape and Reel, 3000
SGM41102A-433P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-433P04YUDT6G/TR	OD2 XXX	Tape and Reel, 3000

# SGM41102/SGM41102A

# True Monolithic Li-Ion/Polymer Battery Protector in Tiny Thin Package

MODEL	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM41102A-433P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-433P05YUDT6G/TR	OD3 XXX	Tape and Reel, 3000
SGM41102A-433P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-433P06YUDT6G/TR	OD4 XXX	Tape and Reel, 3000
SGM41102A-435M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-435M03YUDT6G/TR	OD5 XXX	Tape and Reel, 3000
SGM41102A-435M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-435M04YUDT6G/TR	OD6 XXX	Tape and Reel, 3000
SGM41102A-435M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-435M05YUDT6G/TR	OD7 XXX	Tape and Reel, 3000
SGM41102A-435M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-435M06YUDT6G/TR	OD8 XXX	Tape and Reel, 3000
SGM41102A-435Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-435Q03YUDT6G/TR	OD9 XXX	Tape and Reel, 3000
SGM41102A-435Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-435Q04YUDT6G/TR	ODA XXX	Tape and Reel, 3000
SGM41102A-435Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-435Q05YUDT6G/TR	ODB XXX	Tape and Reel, 3000
SGM41102A-435Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-435Q06YUDT6G/TR	ODC XXX	Tape and Reel, 3000
SGM41102A-435O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-435O03YUDT6G/TR	ODD XXX	Tape and Reel, 3000
SGM41102A-435O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-435O04YUDT6G/TR	ODE XXX	Tape and Reel, 3000
SGM41102A-435O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-435O05YUDT6G/TR	ODF XXX	Tape and Reel, 3000
SGM41102A-435O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-435O06YUDT6G/TR	OE0 XXX	Tape and Reel, 3000
SGM41102A-435P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-435P03YUDT6G/TR	OE1 XXX	Tape and Reel, 3000
SGM41102A-435P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-435P04YUDT6G/TR	OE2 XXX	Tape and Reel, 3000
SGM41102A-435P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-435P05YUDT6G/TR	OE3 XXX	Tape and Reel, 3000
SGM41102A-435P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-435P06YUDT6G/TR	O72 XXX	Tape and Reel, 3000
SGM41102A-438M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-438M03YUDT6G/TR	OE4 XXX	Tape and Reel, 3000
SGM41102A-438M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-438M04YUDT6G/TR	OE5 XXX	Tape and Reel, 3000
SGM41102A-438M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-438M05YUDT6G/TR	OE6 XXX	Tape and Reel, 3000
SGM41102A-438M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-438M06YUDT6G/TR	OE7 XXX	Tape and Reel, 3000
SGM41102A-438Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-438Q03YUDT6G/TR	OE8 XXX	Tape and Reel, 3000
SGM41102A-438Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-438Q04YUDT6G/TR	OE9 XXX	Tape and Reel, 3000
SGM41102A-438Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-438Q05YUDT6G/TR	OEA XXX	Tape and Reel, 3000
SGM41102A-438Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-438Q06YUDT6G/TR	OEB XXX	Tape and Reel, 3000
SGM41102A-438O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-438O03YUDT6G/TR	OEC XXX	Tape and Reel, 3000

# SGM41102/SGM41102A

# True Monolithic Li-Ion/Polymer Battery Protector in Tiny Thin Package

MODEL	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM41102A-438O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-438O04YUDT6G/TR	OED XXX	Tape and Reel, 3000
SGM41102A-438O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-438O05YUDT6G/TR	OEE XXX	Tape and Reel, 3000
SGM41102A-438O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-438O06YUDT6G/TR	OEF XXX	Tape and Reel, 3000
SGM41102A-438P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-438P03YUDT6G/TR	OF0 XXX	Tape and Reel, 3000
SGM41102A-438P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-438P04YUDT6G/TR	OF1 XXX	Tape and Reel, 3000
SGM41102A-438P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-438P05YUDT6G/TR	OF2 XXX	Tape and Reel, 3000
SGM41102A-438P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-438P06YUDT6G/TR	OF3 XXX	Tape and Reel, 3000
SGM41102A-440M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-440M03YUDT6G/TR	OF4 XXX	Tape and Reel, 3000
SGM41102A-440M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-440M04YUDT6G/TR	OF5 XXX	Tape and Reel, 3000
SGM41102A-440M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-440M05YUDT6G/TR	OF6 XXX	Tape and Reel, 3000
SGM41102A-440M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-440M06YUDT6G/TR	OF7 XXX	Tape and Reel, 3000
SGM41102A-440Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-440Q03YUDT6G/TR	OF8 XXX	Tape and Reel, 3000
SGM41102A-440Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-440Q04YUDT6G/TR	OF9 XXX	Tape and Reel, 3000
SGM41102A-440Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-440Q05YUDT6G/TR	OFA XXX	Tape and Reel, 3000
SGM41102A-440Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-440Q06YUDT6G/TR	OFB XXX	Tape and Reel, 3000
SGM41102A-440O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-440O03YUDT6G/TR	OFC XXX	Tape and Reel, 3000
SGM41102A-440O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-440O04YUDT6G/TR	OFD XXX	Tape and Reel, 3000
SGM41102A-440O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-440O05YUDT6G/TR	OFE XXX	Tape and Reel, 3000
SGM41102A-440O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-440O06YUDT6G/TR	O73 XXX	Tape and Reel, 3000
SGM41102A-440P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-440P03YUDT6G/TR	OFF XXX	Tape and Reel, 3000
SGM41102A-440P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-440P04YUDT6G/TR	OG0 XXX	Tape and Reel, 3000
SGM41102A-440P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-440P05YUDT6G/TR	OG1 XXX	Tape and Reel, 3000
SGM41102A-440P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-440P06YUDT6G/TR	OG2 XXX	Tape and Reel, 3000
SGM41102A-443M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-443M03YUDT6G/TR	OG3 XXX	Tape and Reel, 3000
SGM41102A-443M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-443M04YUDT6G/TR	OG4 XXX	Tape and Reel, 3000
SGM41102A-443M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-443M05YUDT6G/TR	OG5 XXX	Tape and Reel, 3000
SGM41102A-443M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-443M06YUDT6G/TR	OG6 XXX	Tape and Reel, 3000



# SGM41102/SGM41102A

# True Monolithic Li-Ion/Polymer Battery Protector in Tiny Thin Package

MODEL	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM41102A-443Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-443Q03YUDT6G/TR	OG7 XXX	Tape and Reel, 3000
SGM41102A-443Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-443Q04YUDT6G/TR	OG8 XXX	Tape and Reel, 3000
SGM41102A-443Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-443Q05YUDT6G/TR	OG9 XXX	Tape and Reel, 3000
SGM41102A-443Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-443Q06YUDT6G/TR	OGA XXX	Tape and Reel, 3000
SGM41102A-443O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-443O03YUDT6G/TR	OGB XXX	Tape and Reel, 3000
SGM41102A-443O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-443O04YUDT6G/TR	OGC XXX	Tape and Reel, 3000
SGM41102A-443O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-443O05YUDT6G/TR	OGD XXX	Tape and Reel, 3000
SGM41102A-443O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-443O06YUDT6G/TR	OGE XXX	Tape and Reel, 3000
SGM41102A-443P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-443P03YUDT6G/TR	OGF XXX	Tape and Reel, 3000
SGM41102A-443P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-443P04YUDT6G/TR	OH0 XXX	Tape and Reel, 3000
SGM41102A-443P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-443P05YUDT6G/TR	OH1 XXX	Tape and Reel, 3000
SGM41102A-443P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-443P06YUDT6G/TR	OH2 XXX	Tape and Reel, 3000
SGM41102A-445M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-445M03YUDT6G/TR	OH3 XXX	Tape and Reel, 3000
SGM41102A-445M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-445M04YUDT6G/TR	OH4 XXX	Tape and Reel, 3000
SGM41102A-445M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-445M05YUDT6G/TR	OH5 XXX	Tape and Reel, 3000
SGM41102A-445M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-445M06YUDT6G/TR	OH6 XXX	Tape and Reel, 3000
SGM41102A-445Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-445Q03YUDT6G/TR	OH7 XXX	Tape and Reel, 3000
SGM41102A-445Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-445Q04YUDT6G/TR	OH8 XXX	Tape and Reel, 3000
SGM41102A-445Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-445Q05YUDT6G/TR	OH9 XXX	Tape and Reel, 3000
SGM41102A-445Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-445Q06YUDT6G/TR	OHA XXX	Tape and Reel, 3000
SGM41102A-445O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-445O03YUDT6G/TR	OHB XXX	Tape and Reel, 3000
SGM41102A-445O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-445O04YUDT6G/TR	OHC XXX	Tape and Reel, 3000
SGM41102A-445O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-445O05YUDT6G/TR	OHD XXX	Tape and Reel, 3000
SGM41102A-445O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-445O06YUDT6G/TR	O74 XXX	Tape and Reel, 3000
SGM41102A-445P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-445P03YUDT6G/TR	OHE XXX	Tape and Reel, 3000
SGM41102A-445P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-445P04YUDT6G/TR	OHF XXX	Tape and Reel, 3000
SGM41102A-445P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-445P05YUDT6G/TR	OIO XXX	Tape and Reel, 3000

# SGM41102/SGM41102A

# True Monolithic Li-Ion/Polymer Battery Protector in Tiny Thin Package

MODEL	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM41102A-445P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-445P06YUDT6G/TR	OI1 XXX	Tape and Reel, 3000
SGM41102A-448M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-448M03YUDT6G/TR	OI2 XXX	Tape and Reel, 3000
SGM41102A-448M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-448M04YUDT6G/TR	OI3 XXX	Tape and Reel, 3000
SGM41102A-448M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-448M05YUDT6G/TR	OI4 XXX	Tape and Reel, 3000
SGM41102A-448M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-448M06YUDT6G/TR	OI5 XXX	Tape and Reel, 3000
SGM41102A-448Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-448Q03YUDT6G/TR	OI6 XXX	Tape and Reel, 3000
SGM41102A-448Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-448Q04YUDT6G/TR	OI7 XXX	Tape and Reel, 3000
SGM41102A-448Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-448Q05YUDT6G/TR	OI8 XXX	Tape and Reel, 3000
SGM41102A-448Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-448Q06YUDT6G/TR	RC4 XXX	Tape and Reel, 3000
SGM41102A-448O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-448O03YUDT6G/TR	OIA XXX	Tape and Reel, 3000
SGM41102A-448O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-448O04YUDT6G/TR	OIB XXX	Tape and Reel, 3000
SGM41102A-448O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-448O05YUDT6G/TR	OIC XXX	Tape and Reel, 3000
SGM41102A-448O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-448O06YUDT6G/TR	OID XXX	Tape and Reel, 3000
SGM41102A-448P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-448P03YUDT6G/TR	OIE XXX	Tape and Reel, 3000
SGM41102A-448P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-448P04YUDT6G/TR	OIF XXX	Tape and Reel, 3000
SGM41102A-448P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-448P05YUDT6G/TR	OJ0 XXX	Tape and Reel, 3000
SGM41102A-448P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-448P06YUDT6G/TR	OJ1 XXX	Tape and Reel, 3000
SGM41102A-450M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-450M03YUDT6G/TR	OJ2 XXX	Tape and Reel, 3000
SGM41102A-450M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-450M04YUDT6G/TR	OJ3 XXX	Tape and Reel, 3000
SGM41102A-450M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-450M05YUDT6G/TR	OJ4 XXX	Tape and Reel, 3000
SGM41102A-450M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-450M06YUDT6G/TR	OJ5 XXX	Tape and Reel, 3000
SGM41102A-450Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-450Q03YUDT6G/TR	OJ6 XXX	Tape and Reel, 3000
SGM41102A-450Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-450Q04YUDT6G/TR	OJ7 XXX	Tape and Reel, 3000
SGM41102A-450Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-450Q05YUDT6G/TR	OJ8 XXX	Tape and Reel, 3000
SGM41102A-450Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-450Q06YUDT6G/TR	OJ9 XXX	Tape and Reel, 3000
SGM41102A-450O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-450O03YUDT6G/TR	OJA XXX	Tape and Reel, 3000
SGM41102A-450O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-450O04YUDT6G/TR	OJB XXX	Tape and Reel, 3000

# SGM41102/SGM41102A

# True Monolithic Li-Ion/Polymer Battery Protector in Tiny Thin Package

MODEL	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM41102A-450O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-450O05YUDT6G/TR	OJC XXX	Tape and Reel, 3000
SGM41102A-450O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-450O06YUDT6G/TR	O75 XXX	Tape and Reel, 3000
SGM41102A-450P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-450P03YUDT6G/TR	OJD XXX	Tape and Reel, 3000
SGM41102A-450P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-450P04YUDT6G/TR	OJE XXX	Tape and Reel, 3000
SGM41102A-450P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-450P05YUDT6G/TR	OJF XXX	Tape and Reel, 3000
SGM41102A-450P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-450P06YUDT6G/TR	OK0 XXX	Tape and Reel, 3000
SGM41102A-453M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-453M03YUDT6G/TR	OK1 XXX	Tape and Reel, 3000
SGM41102A-453M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-453M04YUDT6G/TR	OK2 XXX	Tape and Reel, 3000
SGM41102A-453M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-453M05YUDT6G/TR	OK3 XXX	Tape and Reel, 3000
SGM41102A-453M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-453M06YUDT6G/TR	OK4 XXX	Tape and Reel, 3000
SGM41102A-453Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-453Q03YUDT6G/TR	OK5 XXX	Tape and Reel, 3000
SGM41102A-453Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-453Q04YUDT6G/TR	OK6 XXX	Tape and Reel, 3000
SGM41102A-453Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-453Q05YUDT6G/TR	OK7 XXX	Tape and Reel, 3000
SGM41102A-453Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-453Q06YUDT6G/TR	OK8 XXX	Tape and Reel, 3000
SGM41102A-453O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-453O03YUDT6G/TR	OK9 XXX	Tape and Reel, 3000
SGM41102A-453O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-453O04YUDT6G/TR	OKA XXX	Tape and Reel, 3000
SGM41102A-453O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-453O05YUDT6G/TR	OKB XXX	Tape and Reel, 3000
SGM41102A-453O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-453O06YUDT6G/TR	OKC XXX	Tape and Reel, 3000
SGM41102A-453P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-453P03YUDT6G/TR	OKD XXX	Tape and Reel, 3000
SGM41102A-453P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-453P04YUDT6G/TR	OKE XXX	Tape and Reel, 3000
SGM41102A-453P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-453P05YUDT6G/TR	OKF XXX	Tape and Reel, 3000
SGM41102A-453P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-453P06YUDT6G/TR	OL0 XXX	Tape and Reel, 3000
SGM41102A-455M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-455M03YUDT6G/TR	OL1 XXX	Tape and Reel, 3000
SGM41102A-455M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-455M04YUDT6G/TR	OL2 XXX	Tape and Reel, 3000
SGM41102A-455M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-455M05YUDT6G/TR	OL3 XXX	Tape and Reel, 3000
SGM41102A-455M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-455M06YUDT6G/TR	OL4 XXX	Tape and Reel, 3000
SGM41102A-455Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-455Q03YUDT6G/TR	OL5 XXX	Tape and Reel, 3000

# SGM41102/SGM41102A

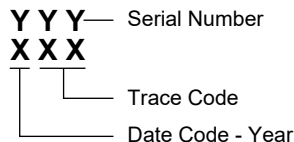
# True Monolithic Li-Ion/Polymer Battery Protector in Tiny Thin Package

MODEL	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM41102A-455Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-455Q04YUDT6G/TR	OL6 XXX	Tape and Reel, 3000
SGM41102A-455Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-455Q05YUDT6G/TR	OL7 XXX	Tape and Reel, 3000
SGM41102A-455Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-455Q06YUDT6G/TR	OL8 XXX	Tape and Reel, 3000
SGM41102A-455O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-455O03YUDT6G/TR	OL9 XXX	Tape and Reel, 3000
SGM41102A-455O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-455O04YUDT6G/TR	OLA XXX	Tape and Reel, 3000
SGM41102A-455O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-455O05YUDT6G/TR	OLB XXX	Tape and Reel, 3000
SGM41102A-455O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-455O06YUDT6G/TR	OLC XXX	Tape and Reel, 3000
SGM41102A-455P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-455P03YUDT6G/TR	OLD XXX	Tape and Reel, 3000
SGM41102A-455P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-455P04YUDT6G/TR	OLE XXX	Tape and Reel, 3000
SGM41102A-455P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-455P05YUDT6G/TR	OLF XXX	Tape and Reel, 3000
SGM41102A-455P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-455P06YUDT6G/TR	OM0 XXX	Tape and Reel, 3000
SGM41102A-458M03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-458M03YUDT6G/TR	OM1 ZZ03]	Tape and Reel, 3000
SGM41102A-458M04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-458M04YUDT6G/TR	OM2 XXX	Tape and Reel, 3000
SGM41102A-458M05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-458M05YUDT6G/TR	OM3 XXX	Tape and Reel, 3000
SGM41102A-458M06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-458M06YUDT6G/TR	OM4 XXX	Tape and Reel, 3000
SGM41102A-458Q03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-458Q03YUDT6G/TR	OM5 XXX	Tape and Reel, 3000
SGM41102A-458Q04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-458Q04YUDT6G/TR	OM6 XXX	Tape and Reel, 3000
SGM41102A-458Q05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-458Q05YUDT6G/TR	OM7 XXX	Tape and Reel, 3000
SGM41102A-458Q06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-458Q06YUDT6G/TR	OM8 XXX	Tape and Reel, 3000
SGM41102A-458O03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-458O03YUDT6G/TR	OM9 XXX	Tape and Reel, 3000
SGM41102A-458O04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-458O04YUDT6G/TR	OMA XXX	Tape and Reel, 3000
SGM41102A-458O05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-458O05YUDT6G/TR	OMB XXX	Tape and Reel, 3000
SGM41102A-458O06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-458O06YUDT6G/TR	OMC XXX	Tape and Reel, 3000
SGM41102A-458P03	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-458P03YUDT6G/TR	OMD XXX	Tape and Reel, 3000
SGM41102A-458P04	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-458P04YUDT6G/TR	OME XXX	Tape and Reel, 3000
SGM41102A-458P05	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-458P05YUDT6G/TR	OMF XXX	Tape and Reel, 3000
SGM41102A-458P06	UTDFN-1.5×2-6L	-40°C to +85°C	SGM41102A-458P06YUDT6G/TR	O6F XXX	Tape and Reel, 3000

**PACKAGE/ORDERING INFORMATION (continued)**

**MARKING INFORMATION**

NOTE: XXX = Date Code and Trace Code.



Green (RoHS & HSF): SG Micro Corp defines "Green" to mean Pb-Free (RoHS compatible) and free of halogen substances. If you have additional comments or questions, please contact your SGMICRO representative directly.

**DEVICE DESCRIPTION**

Model: SGM41102/SGM41102A-AAABCC								
Over-Voltage Threshold Options								
Option Code "AAA"	<b>420</b>	<b>423</b>	<b>425</b>	<b>428</b>	<b>430</b>	<b>433</b>	<b>435</b>	<b>438</b>
Over-Voltage Threshold $V_{OV}$ (V)	4.20	4.225	4.25	4.275	4.30	4.325	4.35	4.375
Option Code "AAA"	<b>440</b>	<b>443</b>	<b>445</b>	<b>448</b>	<b>450</b>	<b>453</b>	<b>455</b>	<b>458</b>
Over-Voltage Threshold $V_{OV}$ (V)	4.40	4.425	4.45	4.475	4.50	4.525	4.55	4.575
Under-Voltage Threshold Options								
Option Code "B"	<b>M</b>		<b>Q</b>		<b>O</b>		<b>P</b>	
Under-Voltage Threshold $V_{UV}$ (V)	2.6		2.7		2.8		3.0	
Current Threshold Combination Options								
Option Code "CC"	<b>03</b>		<b>04</b>		<b>05</b>		<b>06</b>	
Over-Charge Current $I_{OC}$ (A)	0.38		0.48		0.65		0.98	
Over-Discharge Current $I_{OD}$ (A)	0.27		0.36		0.45		0.68	
Short-Circuit Current (A)	5 × 0.27		4 × 0.36		4 × 0.45		4 × 0.68	

**ABSOLUTE MAXIMUM RATINGS**

Pack P to Pack N, 13V<sup>(1)</sup>, 10mA Clamping<sup>(2)</sup> .....5s  
 Pack P to Pack N .....-4.5V or +9V<sup>(3)</sup>, Continuous  
 Pack P to BATN .....-4.5V<sup>(3)</sup> or +5.5V  
 Pack P to Pack N Short-Circuit<sup>(4)</sup> ..... Continuous  
 Pack P to Pack N Attachment Inrush/Outrush<sup>(5)</sup> .... +9V/-4.5V  
 Pack P to BATN Attachment Inrush/Outrush<sup>(6)</sup> ..... ±4.5V  
 Surge Current<sup>(7)</sup> ..... ±20A  
 Junction Temperature ..... +150°C  
 Storage Temperature Range ..... -65°C to +150°C  
 Lead Temperature (Soldering, 10s) ..... +260°C  
 ESD Susceptibility  
 HBM ..... 4000V  
 CDM ..... 1000V

**NOTES:**

1. Evaluation at  $V_{BAT} = 4.5V$ .
2. The clamping may reach 10mA at an input voltage > 13V.
3. Test with a voltage regulated supply that has 2A current limit and increase the voltage progressively for less than 1V/ms slope rate. Apply a voltage to the device under test from 0V to given voltages.
4. The device is tested after being installed on the circuit board in Figure 1. Clip a 4.5V 5A power source onto the P and M to simulate a battery and short the Pack P and the Pack N with an 80mΩ wire.
5. The device is tested after being installed on the circuit board in Figure 1. Connect a 3.2V supply and 2A sinking resistor  $R_{SINK}$  as showed in Figure 2 to the P and M for inrush test. Clip a 4.5V 5A supply for outrush test.
6. The device is tested after being installed on the circuit board in Figure 1 with the circuit in Figure 3.
7. Parallel or connect in reverse polarity two battery packs of Figure 1. Limit the battery pack impedance to limit the surge current to 20A.

**RECOMMENDED OPERATING CONDITIONS**

Supply Voltage Range ..... 0V to 5.5V  
 Battery Voltage Range ..... 0 to 4.5V  
 Junction Temperature Range ..... -40°C to +85°C

**OVERSTRESS CAUTION**

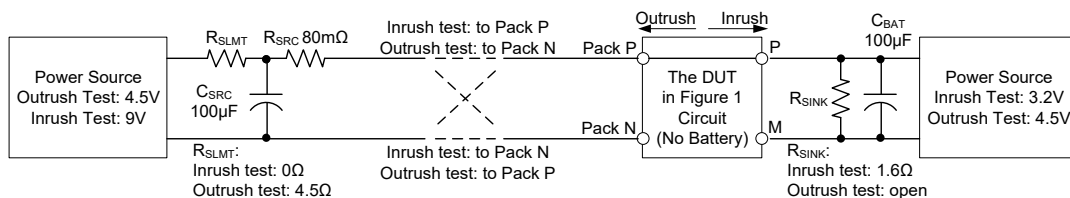
Stresses beyond those listed in Absolute Maximum Ratings may cause permanent damage to the device. Exposure to absolute maximum rating conditions for extended periods may affect reliability. Functional operation of the device at any conditions beyond those indicated in the Recommended Operating Conditions section is not implied.

**ESD SENSITIVITY CAUTION**

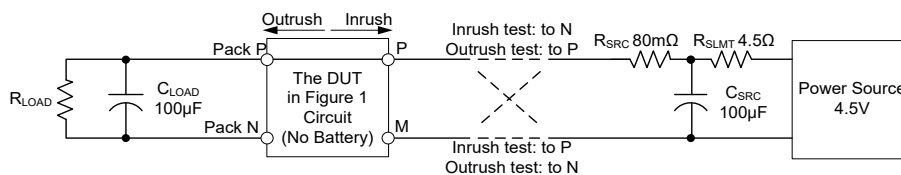
This integrated circuit can be damaged if ESD protections are not considered carefully. SGMICRO recommends that all integrated circuits be handled with appropriate precautions. Failure to observe proper handling and installation procedures can cause damage. ESD damage can range from subtle performance degradation to complete device failure. Precision integrated circuits may be more susceptible to damage because even small parametric changes could cause the device not to meet the published specifications.

**DISCLAIMER**

SG Micro Corp reserves the right to make any change in circuit design, or specifications without prior notice.

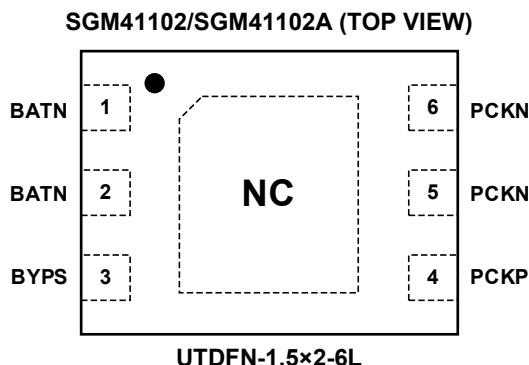


**Figure 2. Test Set-Up for Pack P to Pack N Attachment Inrush/Outrush**



**Figure 3. Test Set-Up for Pack P to BATN Attachment Inrush/Outrush**

**PIN CONFIGURATION**



**PIN DESCRIPTION**

PIN	NAME	TYPE	FUNCTION
1, 2	BATN	G	Ground of Internal Circuit. Connect to the battery cathode end.
3	BYPS	P	Power Supply Pin and Disconnection Locked-Off Triggering Input. Place a 1μF capacitor between this pin and BATN pin, and place a 1kΩ resistor between the pin and the battery pack positive connection. Shorting this pin to PCKN pin momentarily places the circuit into locked-open state.
4	PCKP	P	Internal Connection. No external connection.
5, 6	PCKN	P	Power Input and Output, the Battery Pack Cathode. Short this pin to BATN pin to release off the locked-open state, and make the output path closed.
Exposed Pad	NC	NC	Not Connected Internally. Can be connected to BATN pin or PCKN pin if needed.

NOTE: G = Ground, P = Power for the Circuit, NC = Not Connected.

**ELECTRICAL CHARACTERISTICS**

(T<sub>J</sub> = +25°C, I<sub>CHG</sub> = I<sub>DIS</sub> = 200mA, V<sub>BAT</sub> = 3.7V, unless otherwise noted.)

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
Over-Charge Voltage Threshold	V <sub>OV</sub>	SGM41102-420_--- SGM41102A-420_---	T <sub>J</sub> = +25°C	4.180	4.200	4.220
			T <sub>J</sub> = -20°C to +55°C	4.165		4.235
			T <sub>J</sub> = -40°C to +85°C	4.135		4.265
		SGM41102-423_--- SGM41102A-423_---	T <sub>J</sub> = +25°C	4.205	4.225	4.245
			T <sub>J</sub> = -20°C to +55°C	4.190		4.260
			T <sub>J</sub> = -40°C to +85°C	4.160		4.290
		SGM41102-425_--- SGM41102A-425_---	T <sub>J</sub> = +25°C	4.230	4.250	4.270
			T <sub>J</sub> = -20°C to +55°C	4.215		4.285
			T <sub>J</sub> = -40°C to +85°C	4.185		4.315
		SGM41102-428_--- SGM41102A-428_---	T <sub>J</sub> = +25°C	4.255	4.275	4.295
			T <sub>J</sub> = -20°C to +55°C	4.240		4.310
			T <sub>J</sub> = -40°C to +85°C	4.210		4.340
		SGM41102-430_--- SGM41102A-430_---	T <sub>J</sub> = +25°C	4.280	4.300	4.320
			T <sub>J</sub> = -20°C to +55°C	4.265		4.335
			T <sub>J</sub> = -40°C to +85°C	4.235		4.365
		SGM41102-433_--- SGM41102A-433_---	T <sub>J</sub> = +25°C	4.305	4.325	4.345
			T <sub>J</sub> = -20°C to +55°C	4.290		4.360
			T <sub>J</sub> = -40°C to +85°C	4.260		4.390
		SGM41102-435_--- SGM41102A-435_---	T <sub>J</sub> = +25°C	4.330	4.350	4.370
			T <sub>J</sub> = -20°C to +55°C	4.315		4.385
			T <sub>J</sub> = -40°C to +85°C	4.285		4.415
		SGM41102-438_--- SGM41102A-438_---	T <sub>J</sub> = +25°C	4.355	4.375	4.395
			T <sub>J</sub> = -20°C to +55°C	4.340		4.410
			T <sub>J</sub> = -40°C to +85°C	4.310		4.440
		SGM41102-440_--- SGM41102A-440_---	T <sub>J</sub> = +25°C	4.380	4.400	4.420
			T <sub>J</sub> = -20°C to +55°C	4.365		4.435
			T <sub>J</sub> = -40°C to +85°C	4.335		4.465
		SGM41102-443_--- SGM41102A-443_---	T <sub>J</sub> = +25°C	4.405	4.425	4.445
			T <sub>J</sub> = -20°C to +55°C	4.390		4.460
			T <sub>J</sub> = -40°C to +85°C	4.360		4.490
		SGM41102-445_--- SGM41102A-445_---	T <sub>J</sub> = +25°C	4.430	4.450	4.470
			T <sub>J</sub> = -20°C to +55°C	4.415		4.485
			T <sub>J</sub> = -40°C to +85°C	4.385		4.515
		SGM41102-448_--- SGM41102A-448_---	T <sub>J</sub> = +25°C	4.455	4.475	4.495
			T <sub>J</sub> = -20°C to +55°C	4.440		4.510
			T <sub>J</sub> = -40°C to +85°C	4.410		4.540
		SGM41102-450_--- SGM41102A-450_---	T <sub>J</sub> = +25°C	4.480	4.500	4.520
			T <sub>J</sub> = -20°C to +55°C	4.465		4.535
			T <sub>J</sub> = -40°C to +85°C	4.435		4.565
		SGM41102-453_--- SGM41102A-453_---	T <sub>J</sub> = +25°C	4.505	4.525	4.545
			T <sub>J</sub> = -20°C to +55°C	4.490		4.560
			T <sub>J</sub> = -40°C to +85°C	4.460		4.590



**ELECTRICAL CHARACTERISTICS (continued)**

( $T_J = +25^\circ\text{C}$ ,  $I_{\text{CHG}} = I_{\text{DIS}} = 200\text{mA}$ ,  $V_{\text{BAT}} = 3.7\text{V}$ , unless otherwise noted.)

PARAMETER	SYMBOL	CONDITIONS		MIN	TYP	MAX	UNITS
Over-Charge Voltage Threshold	$V_{\text{OV}}$	SGM41102-455___ SGM41102A-455___	$T_J = +25^\circ\text{C}$	4.530	4.550	4.570	V
			$T_J = -20^\circ\text{C}$ to $+55^\circ\text{C}$	4.515		4.585	
			$T_J = -40^\circ\text{C}$ to $+85^\circ\text{C}$	4.485		4.615	
		SGM41102-458___ SGM41102A-458___	$T_J = +25^\circ\text{C}$	4.555	4.575	4.595	
			$T_J = -20^\circ\text{C}$ to $+55^\circ\text{C}$	4.540		4.610	
			$T_J = -40^\circ\text{C}$ to $+85^\circ\text{C}$	4.510		4.640	
OV Release Hysteresis	$V_{\text{OVHYS}}$	Charger voltage is lower than battery voltage	$T_J = +25^\circ\text{C}$	150	190	230	mV
			$T_J = -40^\circ\text{C}$ to $+85^\circ\text{C}$	145		235	
Battery Under-Voltage Threshold	$V_{\text{UV}}$	SGM41102-___M___ SGM41102A-___M___	$T_J = +25^\circ\text{C}$	2.545	2.600	2.655	V
			$T_J = -40^\circ\text{C}$ to $+85^\circ\text{C}$	2.500		2.700	
		SGM41102-___Q___ SGM41102A-___Q___	$T_J = +25^\circ\text{C}$	2.645	2.700	2.755	
			$T_J = -40^\circ\text{C}$ to $+85^\circ\text{C}$	2.600		2.800	
		SGM41102-___O___ SGM41102A-___O___	$T_J = +25^\circ\text{C}$	2.745	2.800	2.855	
			$T_J = -40^\circ\text{C}$ to $+85^\circ\text{C}$	2.700		2.900	
		SGM41102-___P___ SGM41102A-___P___	$T_J = +25^\circ\text{C}$	2.945	3.000	3.055	
			$T_J = -40^\circ\text{C}$ to $+85^\circ\text{C}$	2.900		3.100	
UV Release Hysteresis	$V_{\text{UVHYS}}$	When a charging supply is applied	$T_J = +25^\circ\text{C}$	75	100	125	mV
			$T_J = -40^\circ\text{C}$ to $+85^\circ\text{C}$	70		130	
Shutdown Voltage	$V_{\text{SHDN}}$	$T_J = +25^\circ\text{C}$	1.40	1.69	1.95	V	
		$T_J = -40^\circ\text{C}$ to $+85^\circ\text{C}$	1.18		2.15		
Over-Discharge Current	$I_{\text{OD}}$	SGM41102-___03 SGM41102A-___03	$T_J = +25^\circ\text{C}$	0.210	0.270	0.330	A
			$T_J = -40^\circ\text{C}$ to $+85^\circ\text{C}$	0.200		0.340	
		SGM41102-___04 SGM41102A-___04	$T_J = +25^\circ\text{C}$	0.320	0.360	0.400	
			$T_J = -40^\circ\text{C}$ to $+85^\circ\text{C}$	0.300		0.420	
		SGM41102-___05 SGM41102A-___05	$T_J = +25^\circ\text{C}$	0.410	0.450	0.490	
			$T_J = -40^\circ\text{C}$ to $+85^\circ\text{C}$	0.380		0.520	
		SGM41102-___06 SGM41102A-___06	$T_J = +25^\circ\text{C}$	0.620	0.680	0.740	
			$T_J = -40^\circ\text{C}$ to $+85^\circ\text{C}$	0.580		0.780	
Over-Charge Current	$I_{\text{OC}}$	SGM41102-___03 SGM41102A-___03	$T_J = +25^\circ\text{C}$	0.335	0.380	0.425	A
			$T_J = -40^\circ\text{C}$ to $+85^\circ\text{C}$	0.320		0.440	
		SGM41102-___04 SGM41102A-___04	$T_J = +25^\circ\text{C}$	0.430	0.480	0.530	
			$T_J = -40^\circ\text{C}$ to $+85^\circ\text{C}$	0.410		0.550	
		SGM41102-___05 SGM41102A-___05	$T_J = +25^\circ\text{C}$	0.585	0.650	0.715	
			$T_J = -40^\circ\text{C}$ to $+85^\circ\text{C}$	0.560		0.740	
		SGM41102-___06 SGM41102A-___06	$T_J = +25^\circ\text{C}$	0.880	0.980	1.080	
			$T_J = -40^\circ\text{C}$ to $+85^\circ\text{C}$	0.840		1.120	
Pass Resistance	$R_p$	$T_J = +25^\circ\text{C}$		43	52	m $\Omega$	
		$T_J = -40^\circ\text{C}$ to $+85^\circ\text{C}$			62		
Operating Current	$I_{\text{OP}}$	$T_J = +25^\circ\text{C}$		1.8	2.6	$\mu\text{A}$	
		$T_J = -40^\circ\text{C}$ to $+85^\circ\text{C}$			3.0		

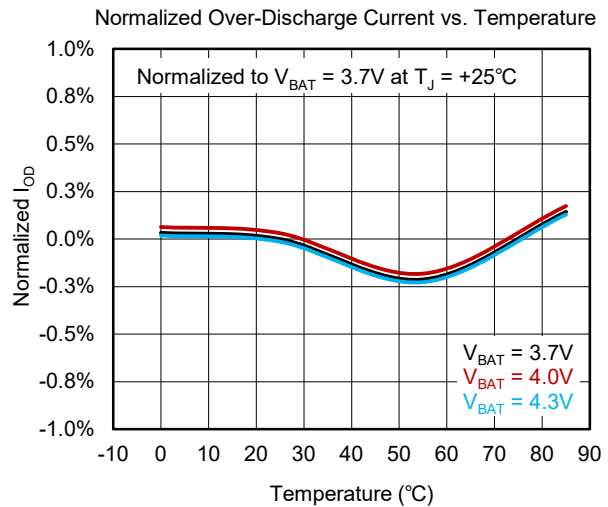
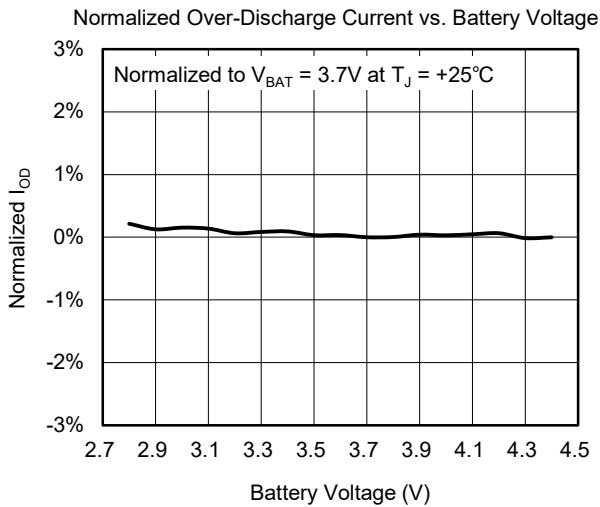
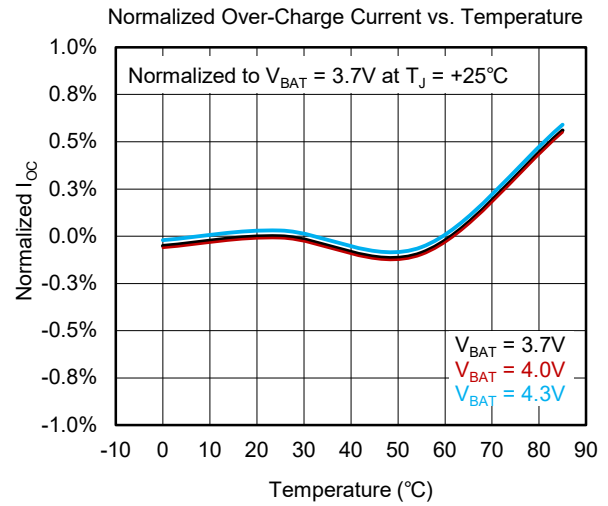
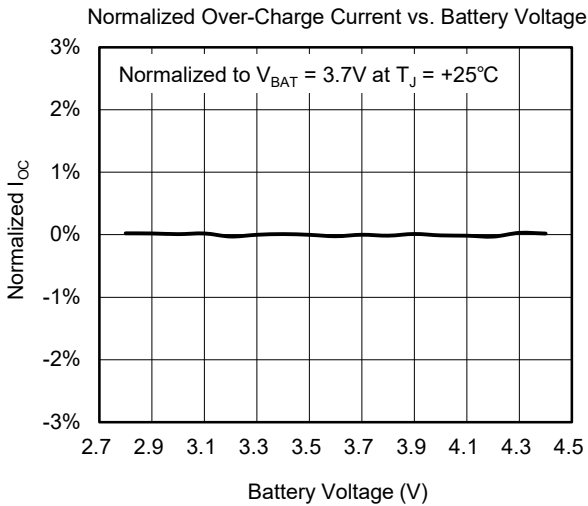
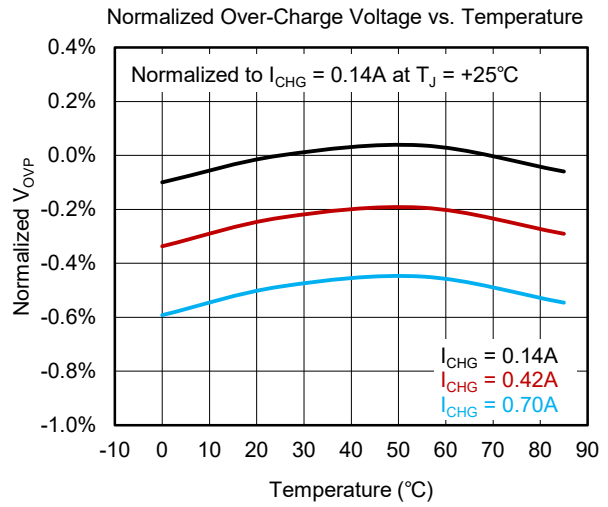
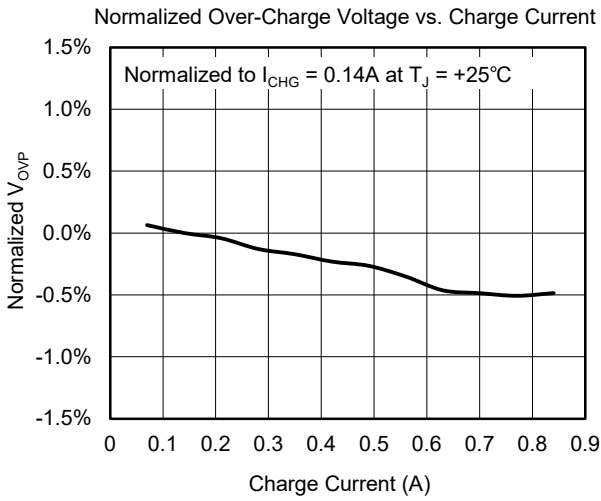
**ELECTRICAL CHARACTERISTICS (continued)**

( $T_J = +25^\circ\text{C}$ ,  $I_{\text{CHG}} = I_{\text{DIS}} = 200\text{mA}$ ,  $V_{\text{BAT}} = 3.7\text{V}$ , unless otherwise noted.)

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS	
Shutdown Current	$I_{\text{SHDN}}$	The stable current flowing into the device when it is in any of following shutdown conditions that the battery voltage is lower than $V_{\text{UV}}$ (then $V_{\text{SHDN}}$ if the battery voltage further drops), the device is set into latched-off	$T_J = +25^\circ\text{C}$			0.05	$\mu\text{A}$
			$T_J = -40^\circ\text{C}$ to $+85^\circ\text{C}$			0.30	
Over-Voltage Detection Delay	$t_{\text{OVDP}}$		0.48	1.05	1.62	s	
Under-Voltage Detection Delay	$t_{\text{UVPD}}$		14	32	50	ms	
Over-Discharge Current Detection Delay	$t_{\text{ODD}}$		14	32	50	ms	
Over-Charge Current Detection Delay	$t_{\text{OCD}}$		3.7	8	13	ms	
Discharge Short-Circuit Detection Delay	$t_{\text{OCSD}}$		0.1	0.3	1	ms	
Discharge Short-Circuit Current	$I_{\text{SC}}$	SGM41102-____03, SGM41102A-____03		$5 \times I_{\text{OD}}$		A	
		Other Options		$4 \times I_{\text{OD}}$			

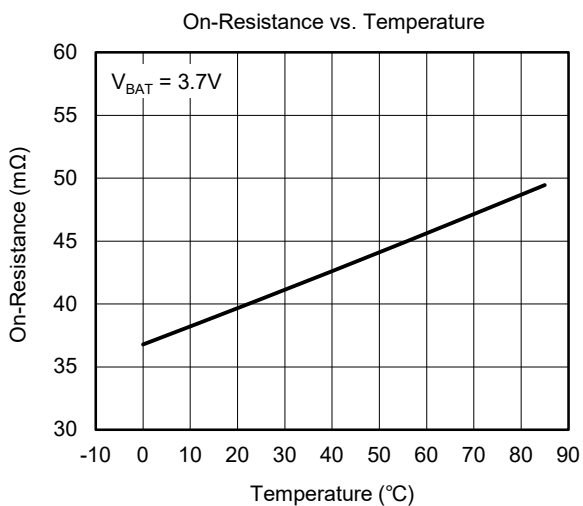
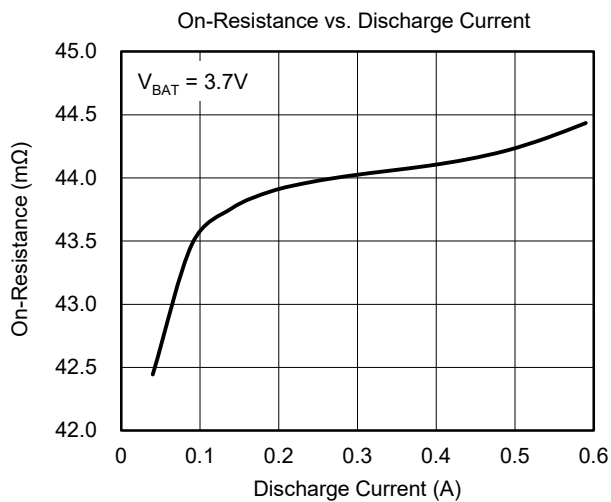
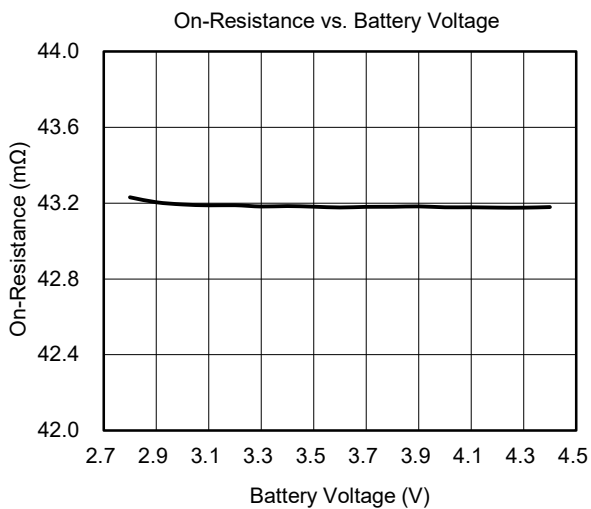
TYPICAL PERFORMANCE CHARACTERISTICS

T<sub>J</sub> = +25°C, I<sub>CHG</sub> = I<sub>DIS</sub> = 50mA, V<sub>BAT</sub> = 3.7V, unless otherwise noted.



**TYPICAL PERFORMANCE CHARACTERISTICS (continued)**

$T_J = +25^\circ\text{C}$ ,  $I_{\text{CHG}} = I_{\text{DIS}} = 50\text{mA}$ ,  $V_{\text{BAT}} = 3.7\text{V}$ , unless otherwise noted.



## DETAILED DESCRIPTION

The SGM41102/SGM41102A monitors voltage and current applied on battery cell connected between PCKP and BATN, and opens the connection between battery and pack terminal with its internal switches when a fault condition is detected.

### Voltage Related Protections

When battery voltage reaches over-voltage threshold ( $V_{OV}$ ), the charge path is open-circuit. The path closes again when the charger voltage is lower than battery voltage and the battery voltage falls back about  $V_{OVHYS}$  below the over-voltage threshold ( $V_{OV}$ ).

In order to protect the battery from over-discharge when battery voltage falls below  $V_{UV}$  for  $t_{UVPD}$  or  $V_{SHDN}$  instantly, the discharge path is open-circuit, the device enters into shutdown with only very low resistive leakage flowing into it, which helps to keep the battery from harmful exhausted condition as long as possible. The path closes again when a charging supply is applied and the battery voltage rises to about  $V_{UVHYS}$  above the  $V_{UV}$  threshold.

**0V charging function:** This feature enables recharging an attached battery that has very low voltage. When the applied voltage is  $> \sim 1.6V$ , the charging starts. If the battery voltage is in the range of 0V to  $V_{SHDN}$ , charge current flows through the MOSFET body diode; if in the range of  $V_{SHDN}$  to  $V_{UV}$ , the path switch is on for 32ms ( $t_{UVPD}$ ) in every 34ms and off for 2ms when charge current flows through the body diode. During this period, the charger will see the terminal voltage steps up/down.

### Current Related Protections

When over-discharge current condition occurs and keeps for over-discharge current detection delay ( $t_{ODD}$ ), the discharge path opens.

During a charging condition if an over-charge current is identified, the SGM41102/SGM41102A enters the locked-off state. This state can be reset by charger removal (pack removal).

**Over-discharge current protection selection:** The SGM41102 keeps open until the loading being removed or charger being plugged. The SGM41102A keeps retrying until the over-current release or the battery discharges to low when the SGM41102A turns into battery under-voltage protection state.

**Short-circuit protection:** When discharge current exceeds the over-current threshold, discharge path disconnects instantly in  $t_{OCSD}$ , in order to protect the battery from potential over-current stress. After this disconnection, the SGM41102/SGM41102A stays in the locked-off non-conducting state until being reactivated.

**Burst load outrush:** In many systems, overload conditions will occur momentarily. The device allows for this short duration discharge condition by allowing the discharge path to remain closed even after an over-discharge current is detected for duration of over-discharge current detection delay.

When an over-charge current condition is identified, and after over-charge current detection deglitch, the charge path is cut off. The device restores to the conducting state when the PCKP to PCKN voltage drops about 3mV lower than the battery voltage.

**Parallel battery packs:** When paralleling two battery packs utilizing SGM41102/SGM41102As, a momentary current surge may cause over-charge current protection in the pack with the lower voltage. The higher voltage pack can enter an over-discharge current protection. The over-charge current or over-discharge current protection resets only after the higher voltage battery pack discharges to a voltage slightly lower than the lower voltage pack. After this discharge, both packs will conduct.

It is highly recommended that the packs should be placed into a locked-open non-conducting state first (by connecting BYPS to PCKN momentarily) before being paralleled to avoid current overstress. When a charge supply is applied to the paralleled packs, the locked-open state will release.

**Battery delivery state:** It is recommended to deliver a battery pack in a locked-off non-conducting state to avoid unintentional shorting during production handling or transportation. The circuit of Figure 1 places the SGM41102/SGM41102A into a locked-off state after battery attachment by momentarily shorting BYPS and PCKN.

## DETAILED DESCRIPTION (continued)

Connecting a 220nF capacitor clapping between BATN and PCKN may place the device into conducting state, which might couple enough charge for making enough voltage difference between PCKN and PCKP for over about 1.3V. The voltage difference is the dividing result of the clapping capacitance and the load resistance and capacitance. The 220nF capacitance is recommended for no load condition.

**Pack activation:** In order to release the pack from locked-off state and to place it into a conducting state, apply a charging input, or connect PCKN to BATN momentarily when there is no high load capacitance.

**Caution:** The battery short or load side terminal short outside the protection circuit's loop during battery attaching may cause excessive high surge current and excessive high current-breaking voltage surge, which may cause damage or degrade the life duration of battery and protection circuit. It is recorded that the accidental anode to ground plane shorting causes heavy surge, which can actually be avoided by leaving enough clearance around the anode pad on PCB or soldering/attaching the anode firstly in assembly (as the short between cathode to ground will not cause excessive surge).

### Surge, ESD and Reversed Attachment

The SGM41102/SGM41102A absorbs voltage surge applied between PCKP and PCKN, by passing the surge current through its switch and the battery. Surge may occur when attaching the pack or battery cell.

The SGM41102/SGM41102A survives either if a cell is placed in reverse or a charge input is attached in reverse, but not both at the same time. Any of these reverse attachments, short circuits, inrush surges and outrush will cause overstress. Do not test those cases in normal production inspection, as this kind of test itself may cause performance degradation or even damage the device.

**Caution about ESD damage to the battery:** The battery pack might be the biggest element in equipment and induce much during an ESD event. Careful design of guided discharge path is desired for the equipment case sealing air-gap discharge over the battery and those connect to the battery closely.

**Caution on electrochemical corrosion:** As a battery can apply potential over the electrodes continuously and cause electrochemical corrosion, the corrosion product may spread in the hollow beneath a surface mount device and cause leakage. Moisture-proof coating is recommended, especially when using compact devices.

### Cautions for Evaluation Test

Some types of electronic load simulators may have excessive inrush current, and some BPM testers may have voltage transition surges, which may trigger the protection of the SGM41102/SGM41102A. Careful attention is required for doing such evaluations with these kinds of equipment. External voltage and current limits within the conditions specified in the Absolute Maximum Ratings section of this datasheet are required.

### Select Protection Parameters

Battery models from different vendors may be customized for different applications. Consult the battery vendor for protection limits for specific battery model.

Parameters for the protection circuit and of the charger circuit affecting same variables should be set for proper charge or discharge protection sequence. For example, the over-voltage threshold of the battery should be 50mV ~ 100mV higher than constant voltage threshold of the charger.

**Cautions on parameter misalignment:** If the  $V_{OV}$  is lower than the full charge voltage of the battery charger, the protection circuit cuts off the battery charge path before the battery is fully charged, and turns into the non-conductive locked-off state; if the  $I_{OC}$  is lower than the charge current, the protection circuit also turns itself into the locked-off state. In either  $V_{OV}$  or  $I_{OC}$ , the charger input should be removed and then reapplied for activating the protection circuit from the locked-off state to the conducting state. If the charger is not removed after a  $V_{OV}$  or  $I_{OV}$  event, the battery will not be charged even if the battery voltage is depleted.

**REVISION HISTORY**

NOTE: Page numbers for previous revisions may differ from page numbers in the current version.

<b>NOVEMBER 2021 – REV.A to REV.A.1</b>	<b>Page</b>
Updated Absolute Maximum Ratings section.....	22
Updated Recommended Operating Conditions section.....	22

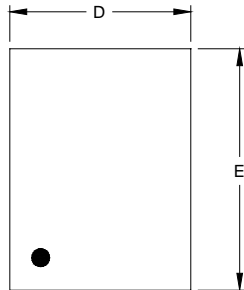
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<b>Changes from Original (APRIL 2021) to REV.A</b>	<b>Page</b>
Changed from product preview to production data.....	All

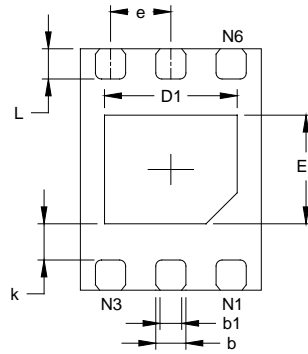
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PACKAGE OUTLINE DIMENSIONS

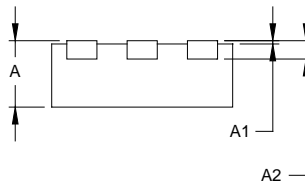
UTDFN-1.5x2-6L



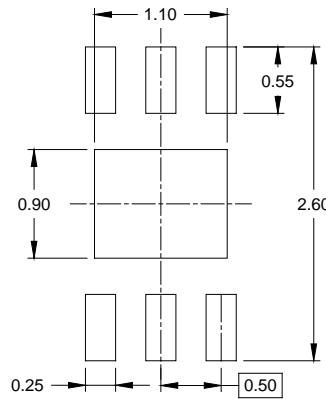
TOP VIEW



BOTTOM VIEW



SIDE VIEW



RECOMMENDED LAND PATTERN (Unit: mm)

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MIN	MAX	MIN	MAX
A	0.500	0.600	0.020	0.024
A1	0.000	0.050	0.000	0.002
A2	0.152 REF		0.006 REF	
D	1.400	1.600	0.055	0.063
D1	1.000	1.200	0.039	0.047
E	1.900	2.100	0.075	0.083
E1	0.800	1.000	0.031	0.039
k	0.300 REF		0.012 REF	
b	0.200	0.300	0.008	0.012
b1	0.180 REF		0.007 REF	
e	0.500 BSC		0.020 BSC	
L	0.200	0.300	0.008	0.012

NOTE: This drawing is subject to change without notice.



# PACKAGE INFORMATION

## TAPE AND REEL INFORMATION

### REEL DIMENSIONS



### TAPE DIMENSIONS



NOTE: The picture is only for reference. Please make the object as the standard.

### KEY PARAMETER LIST OF TAPE AND REEL

Package Type	Reel Diameter	Reel Width W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P0 (mm)	P1 (mm)	P2 (mm)	W (mm)	Pin1 Quadrant
UTDFN-1.5×2-6L	7"	9.5	1.70	2.30	0.75	4.0	4.0	2.0	8.0	Q2

000001

# PACKAGE INFORMATION

## CARTON BOX DIMENSIONS



NOTE: The picture is only for reference. Please make the object as the standard.

## KEY PARAMETER LIST OF CARTON BOX

Reel Type	Length (mm)	Width (mm)	Height (mm)	Pizza/Carton
7" (Option)	368	227	224	8
7"	442	410	224	18

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