

SGM808B

Small Package, High Precision Voltage Detector

GENERAL DESCRIPTION

The SGM808B is a low-power and high-accuracy voltage detector. The adjustable threshold range is 1.5V to 6V with increments of 0.1V, which greatly provides application flexibility.

The device has an N-channel open-drain output. It is very suitable for applications in power sequencing, reset sequencing and power switching.

The SGM808B is available in Green SC70-4 (R), SOT-23-5 and SOT-89-3 packages. It is specified over the -40°C to +125°C operating junction temperature range.

FEATURES

- **Operating Voltage Range:** 0.95V to 10V
- **High Accuracy Detection:** $\pm 1.5\%$ at $T_J = +25^\circ\text{C}$
- **Low Power Consumption:** 1 μA (TYP) at $V_{CC} = 3.5\text{V}$
- **Detection Voltage Range:** 1.5V to 6V (0.1V Increments)
- **Hysteresis Characteristics:** 5% (TYP)
- **N-Channel Open-Drain Output**
- **Available in Green SC70-4 (R), SOT-23-5 and SOT-89-3 Packages**

APPLICATIONS

Power Sequencing and Reset Sequencing
Power Switching
Automotive Equipment
Portable Equipment
Computers/Servers

PACKAGE/ORDERING INFORMATION

MODEL	DETECTION VOLTAGE (V)	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM808B-1.5	1.5	SC70-4 (R)	-40°C to +125°C	SGM808B-1.5XC4G/TR	SAGXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-1.5XN5G/TR	SAHXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-1.5XK3G/TR	SAIXX	Tape and Reel, 1000
SGM808B-1.6	1.6	SC70-4 (R)	-40°C to +125°C	SGM808B-1.6XC4G/TR	SAJXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-1.6XN5G/TR	SAKXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-1.6XK3G/TR	ORAXX	Tape and Reel, 1000
SGM808B-1.7	1.7	SC70-4 (R)	-40°C to +125°C	SGM808B-1.7XC4G/TR	SALXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-1.7XN5G/TR	SAMXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-1.7XK3G/TR	SANXX	Tape and Reel, 1000
SGM808B-1.8	1.8	SC70-4 (R)	-40°C to +125°C	SGM808B-1.8XC4G/TR	SUVXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-1.8XN5G/TR	SAPXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-1.8XK3G/TR	SAQXX	Tape and Reel, 1000
SGM808B-1.9	1.9	SC70-4 (R)	-40°C to +125°C	SGM808B-1.9XC4G/TR	SARXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-1.9XN5G/TR	SASXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-1.9XK3G/TR	SATXX	Tape and Reel, 1000
SGM808B-2.0	2.0	SC70-4 (R)	-40°C to +125°C	SGM808B-2.0XC4G/TR	SAUXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-2.0XN5G/TR	SAVXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-2.0XK3G/TR	SAWXX	Tape and Reel, 1000
SGM808B-2.1	2.1	SC70-4 (R)	-40°C to +125°C	SGM808B-2.1XC4G/TR	SAXXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-2.1XN5G/TR	SAYXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-2.1XK3G/TR	SAZXX	Tape and Reel, 1000
SGM808B-2.2	2.2	SC70-4 (R)	-40°C to +125°C	SGM808B-2.2XC4G/TR	SBGXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-2.2XN5G/TR	SBHXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-2.2XK3G/TR	SBIXX	Tape and Reel, 1000
SGM808B-2.3	2.3	SC70-4 (R)	-40°C to +125°C	SGM808B-2.3XC4G/TR	SBJXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-2.3XN5G/TR	SBKXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-2.3XK3G/TR	SBLXX	Tape and Reel, 1000
SGM808B-2.4	2.4	SC70-4 (R)	-40°C to +125°C	SGM808B-2.4XC4G/TR	SBMXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-2.4XN5G/TR	SBNXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-2.4XK3G/TR	SUWXX	Tape and Reel, 1000

PACKAGE/ORDERING INFORMATION (continued)

MODEL	DETECTION VOLTAGE (V)	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM808B-2.5	2.5	SC70-4 (R)	-40°C to +125°C	SGM808B-2.5XC4G/TR	SBPXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-2.5XN5G/TR	SBQXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-2.5XK3G/TR	SBRXX	Tape and Reel, 1000
SGM808B-2.6	2.6	SC70-4 (R)	-40°C to +125°C	SGM808B-2.6XC4G/TR	SBSXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-2.6XN5G/TR	SBTXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-2.6XK3G/TR	SBUXX	Tape and Reel, 1000
SGM808B-2.7	2.7	SC70-4 (R)	-40°C to +125°C	SGM808B-2.7XC4G/TR	SBVXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-2.7XN5G/TR	SBWXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-2.7XK3G/TR	SBXXX	Tape and Reel, 1000
SGM808B-2.8	2.8	SC70-4 (R)	-40°C to +125°C	SGM808B-2.8XC4G/TR	SBYXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-2.8XN5G/TR	SBZXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-2.8XK3G/TR	SCGXX	Tape and Reel, 1000
SGM808B-2.9	2.9	SC70-4 (R)	-40°C to +125°C	SGM808B-2.9XC4G/TR	SCHXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-2.9XN5G/TR	R5FXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-2.9XK3G/TR	SCIXX	Tape and Reel, 1000
SGM808B-3.0	3.0	SC70-4 (R)	-40°C to +125°C	SGM808B-3.0XC4G/TR	SCJXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-3.0XN5G/TR	SCKXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-3.0XK3G/TR	SCLXX	Tape and Reel, 1000
SGM808B-3.1	3.1	SC70-4 (R)	-40°C to +125°C	SGM808B-3.1XC4G/TR	SCMXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-3.1XN5G/TR	SCNXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-3.1XK3G/TR	SUXXX	Tape and Reel, 1000
SGM808B-3.2	3.2	SC70-4 (R)	-40°C to +125°C	SGM808B-3.2XC4G/TR	SCPXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-3.2XN5G/TR	SCQXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-3.2XK3G/TR	SCRXX	Tape and Reel, 1000
SGM808B-3.3	3.3	SC70-4 (R)	-40°C to +125°C	SGM808B-3.3XC4G/TR	SCSXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-3.3XN5G/TR	SCTXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-3.3XK3G/TR	SCUXX	Tape and Reel, 1000
SGM808B-3.4	3.4	SC70-4 (R)	-40°C to +125°C	SGM808B-3.4XC4G/TR	SCVXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-3.4XN5G/TR	SCWXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-3.4XK3G/TR	SCXXX	Tape and Reel, 1000

PACKAGE/ORDERING INFORMATION (continued)

MODEL	DETECTION VOLTAGE (V)	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM808B-3.5	3.5	SC70-4 (R)	-40°C to +125°C	SGM808B-3.5XC4G/TR	SCYXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-3.5XN5G/TR	SCZXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-3.5XK3G/TR	SDGXX	Tape and Reel, 1000
SGM808B-3.6	3.6	SC70-4 (R)	-40°C to +125°C	SGM808B-3.6XC4G/TR	SDHXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-3.6XN5G/TR	SDIXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-3.6XK3G/TR	SDJXX	Tape and Reel, 1000
SGM808B-3.7	3.7	SC70-4 (R)	-40°C to +125°C	SGM808B-3.7XC4G/TR	SDKXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-3.7XN5G/TR	SDLXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-3.7XK3G/TR	SDMXX	Tape and Reel, 1000
SGM808B-3.8	3.8	SC70-4 (R)	-40°C to +125°C	SGM808B-3.8XC4G/TR	SDNXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-3.8XN5G/TR	SUYXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-3.8XK3G/TR	SDPXX	Tape and Reel, 1000
SGM808B-3.9	3.9	SC70-4 (R)	-40°C to +125°C	SGM808B-3.9XC4G/TR	SDQXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-3.9XN5G/TR	SDRXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-3.9XK3G/TR	SDSXX	Tape and Reel, 1000
SGM808B-4.0	4.0	SC70-4 (R)	-40°C to +125°C	SGM808B-4.0XC4G/TR	SDTXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-4.0XN5G/TR	SDUXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-4.0XK3G/TR	SDVXX	Tape and Reel, 1000
SGM808B-4.1	4.1	SC70-4 (R)	-40°C to +125°C	SGM808B-4.1XC4G/TR	SDWXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-4.1XN5G/TR	SDXXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-4.1XK3G/TR	SDYXX	Tape and Reel, 1000
SGM808B-4.2	4.2	SC70-4 (R)	-40°C to +125°C	SGM808B-4.2XC4G/TR	SDZXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-4.2XN5G/TR	SEGXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-4.2XK3G/TR	SEHXX	Tape and Reel, 1000
SGM808B-4.3	4.3	SC70-4 (R)	-40°C to +125°C	SGM808B-4.3XC4G/TR	SEIXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-4.3XN5G/TR	SEJXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-4.3XK3G/TR	SEKXX	Tape and Reel, 1000
SGM808B-4.4	4.4	SC70-4 (R)	-40°C to +125°C	SGM808B-4.4XC4G/TR	SELXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-4.4XN5G/TR	SEMXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-4.4XK3G/TR	SENXX	Tape and Reel, 1000

PACKAGE/ORDERING INFORMATION (continued)

MODEL	DETECTION VOLTAGE (V)	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM808B-4.5	4.5	SC70-4 (R)	-40°C to +125°C	SGM808B-4.5XC4G/TR	SUZXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-4.5XN5G/TR	SEPXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-4.5XK3G/TR	SEQXX	Tape and Reel, 1000
SGM808B-4.6	4.6	SC70-4 (R)	-40°C to +125°C	SGM808B-4.6XC4G/TR	SERXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-4.6XN5G/TR	SESXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-4.6XK3G/TR	SETXX	Tape and Reel, 1000
SGM808B-4.7	4.7	SC70-4 (R)	-40°C to +125°C	SGM808B-4.7XC4G/TR	SEUXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-4.7XN5G/TR	SEVXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-4.7XK3G/TR	SEWXX	Tape and Reel, 1000
SGM808B-4.8	4.8	SC70-4 (R)	-40°C to +125°C	SGM808B-4.8XC4G/TR	SEXXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-4.8XN5G/TR	SEYXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-4.8XK3G/TR	SEZXX	Tape and Reel, 1000
SGM808B-4.9	4.9	SC70-4 (R)	-40°C to +125°C	SGM808B-4.9XC4G/TR	SFGXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-4.9XN5G/TR	SFHXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-4.9XK3G/TR	SFIXX	Tape and Reel, 1000
SGM808B-5.0	5.0	SC70-4 (R)	-40°C to +125°C	SGM808B-5.0XC4G/TR	SFJXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-5.0XN5G/TR	SFKXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-5.0XK3G/TR	SFLXX	Tape and Reel, 1000
SGM808B-5.1	5.1	SC70-4 (R)	-40°C to +125°C	SGM808B-5.1XC4G/TR	SFMXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-5.1XN5G/TR	SFNXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-5.1XK3G/TR	SVGXX	Tape and Reel, 1000
SGM808B-5.2	5.2	SC70-4 (R)	-40°C to +125°C	SGM808B-5.2XC4G/TR	SFPXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-5.2XN5G/TR	SFQXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-5.2XK3G/TR	SFRXX	Tape and Reel, 1000
SGM808B-5.3	5.3	SC70-4 (R)	-40°C to +125°C	SGM808B-5.3XC4G/TR	SFSXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-5.3XN5G/TR	SFTXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-5.3XK3G/TR	SFUXX	Tape and Reel, 1000
SGM808B-5.4	5.4	SC70-4 (R)	-40°C to +125°C	SGM808B-5.4XC4G/TR	SFVXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-5.4XN5G/TR	SFWXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-5.4XK3G/TR	SFXXX	Tape and Reel, 1000

PACKAGE/ORDERING INFORMATION (continued)

MODEL	DETECTION VOLTAGE (V)	PACKAGE DESCRIPTION	SPECIFIED TEMPERATURE RANGE	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
SGM808B-5.5	5.5	SC70-4 (R)	-40°C to +125°C	SGM808B-5.5XC4G/TR	SFYXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-5.5XN5G/TR	SFZXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-5.5XK3G/TR	SGGXX	Tape and Reel, 1000
SGM808B-5.6	5.6	SC70-4 (R)	-40°C to +125°C	SGM808B-5.6XC4G/TR	SGHXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-5.6XN5G/TR	SGIXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-5.6XK3G/TR	SGJXX	Tape and Reel, 1000
SGM808B-5.7	5.7	SC70-4 (R)	-40°C to +125°C	SGM808B-5.7XC4G/TR	SGKXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-5.7XN5G/TR	SGLXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-5.7XK3G/TR	SGMXX	Tape and Reel, 1000
SGM808B-5.8	5.8	SC70-4 (R)	-40°C to +125°C	SGM808B-5.8XC4G/TR	SGNXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-5.8XN5G/TR	SVHXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-5.8XK3G/TR	SGPXX	Tape and Reel, 1000
SGM808B-5.9	5.9	SC70-4 (R)	-40°C to +125°C	SGM808B-5.9XC4G/TR	SGQXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-5.9XN5G/TR	SGRXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-5.9XK3G/TR	SGSXX	Tape and Reel, 1000
SGM808B-6.0	6.0	SC70-4 (R)	-40°C to +125°C	SGM808B-6.0XC4G/TR	SGTXX	Tape and Reel, 3000
		SOT-23-5	-40°C to +125°C	SGM808B-6.0XN5G/TR	SGUXX	Tape and Reel, 3000
		SOT-89-3	-40°C to +125°C	SGM808B-6.0XK3G/TR	SGVXX	Tape and Reel, 1000

NOTE: If you need push-pull output devices, please contact the factory.

MARKING INFORMATION

NOTE: XX = Date Code.

YYY X X

— Date Code - Week

— Date Code - Year

— Serial Number

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.

ABSOLUTE MAXIMUM RATINGS

Input Voltage Range	GND - 0.3V to 12V
Output Voltage, V_{OUT}	GND - 0.3V to 12V
Output Current, I_{OUT}	50mA
Package Thermal Resistance	
SC70-4 (R), θ_{JA}	672°C/W
SOT-23-5, θ_{JA}	260°C/W
SOT-89-3, θ_{JA}	115°C/W
Junction Temperature	+150°C
Storage Temperature Range	-65°C to +150°C
Lead Temperature (Soldering, 10s)	+260°C
ESD Susceptibility	
HBM	4000V
CDM	1000V

RECOMMENDED OPERATING CONDITIONS

Operating Junction Temperature Range	-40°C to +125°C
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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.

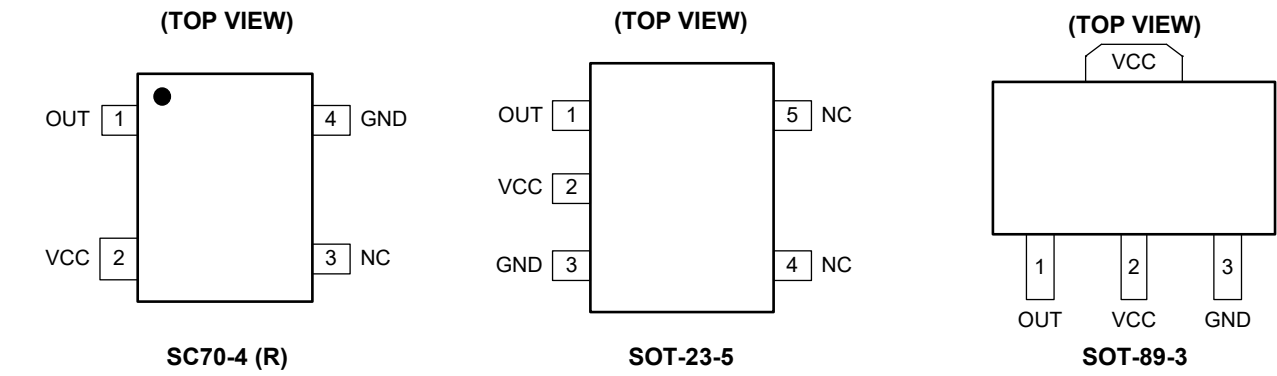
ESD SENSITIVITY CAUTION

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.

PIN CONFIGURATIONS



PIN DESCRIPTION

PIN			NAME	FUNCTION
SC70-4 (R)	SOT-23-5	SOT-89-3		
1	1	1	OUT	Output Pin.
2	2	2	VCC	Supply Voltage Pin.
4	3	3	GND	Ground Pin.
3	4, 5	—	NC	Not Connected.

ELECTRICAL CHARACTERISTICS

(T_J = -40°C to +125°C, typical values are at T_J = +25°C, unless otherwise noted.)

PARAMETER	SYMBOL	CONDITIONS		MIN	TYP	MAX	UNITS
Detection Voltage Accuracy	-V _{DET}	Test Circuit 1	T _J = +25°C	-1.5		1.5	%
			T _J = -40°C to +125°C	-2		2	
Hysteresis Accuracy	V _{HYS}	Test Circuit 1	T _J = +25°C	3.5	5	7	%
			T _J = -40°C to +125°C	3	5	8	
Operating Voltage	V _{CC}	Test Circuit 1		0.95		10	V
Detection Voltage Temperature Characteristics ⁽¹⁾	$\frac{\Delta(-V_{DET})}{\Delta T_J \times (-V_{DET})}$	T _J = -40°C to +125°C, Test Circuit 1			±30	±250	ppm/°C
Current Consumption	I _{SS}	Test Circuit 2	V _{CC} = 3.5V, -V _{DET} = 1.5V to 2.6V		1.0	2.1	μA
			V _{CC} = 4.5V, -V _{DET} = 2.7V to 3.9V		1.1	2.2	
			V _{CC} = 6.0V, -V _{DET} = 4.0V to 5.6V		1.2	2.4	
			V _{CC} = 7.5V, -V _{DET} = 5.7V to 6.0V		1.3	2.5	
Output Current	I _{OUT}	Test Circuit 3, V _{OUT} = 0.5V	V _{CC} = 1.2V, -V _{DET} = 1.5V to 6.0V	0.80	3.15		mA
			V _{CC} = 2.4V, -V _{DET} = 2.7V to 6.0V	4.00	7.50		
Leakage Current	I _{LEAK}	V _{CC} = 10V, V _{OUT} = 10V, Test Circuit 3				100	nA
Response Time	t _{PLH}	V _{CC} = (-V _{DET}) × 0.9 to (-V _{DET}) × 1.1, Test Circuit 1				240	μs

NOTE:

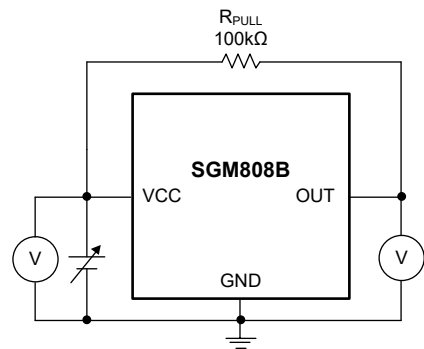
1. The temperature change ratio of the detection voltage can be calculated by:

$$\frac{\Delta(-V_{DET})}{\Delta T_J} [\text{mV} / ^\circ\text{C}]^{(1)} = -V_{DET} (\text{TYP}) [\text{V}]^{(2)} \times \frac{\Delta(-V_{DET})}{\Delta T_J \times (-V_{DET})} [\text{ppm} / ^\circ\text{C}]^{(3)} / 1000$$

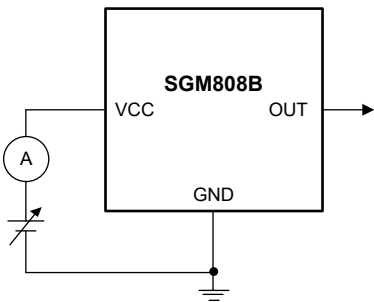
Where: $\frac{\Delta(-V_{DET})}{\Delta T_J}$ is the temperature change ratio of the detection voltage, -V_{DET} (TYP) is the specified detection voltage, and

$\frac{\Delta(-V_{DET})}{\Delta T_J \times (-V_{DET})}$ is the detection voltage temperature coefficient.

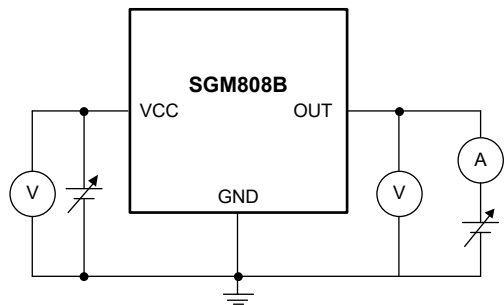
TEST CIRCUITS



Test Circuit 1

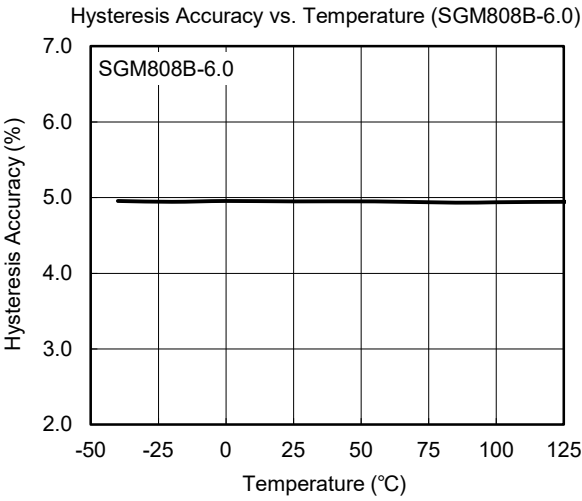
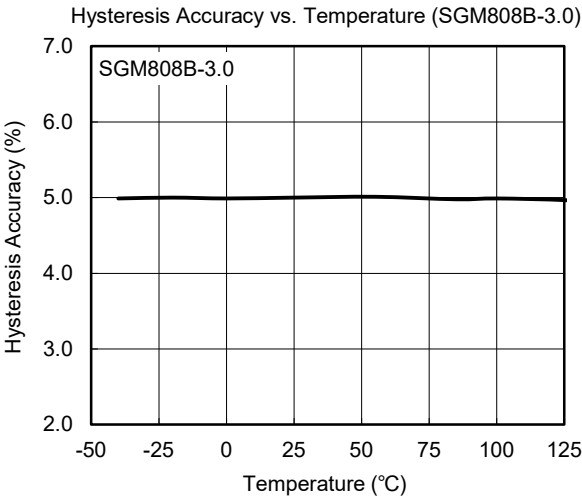
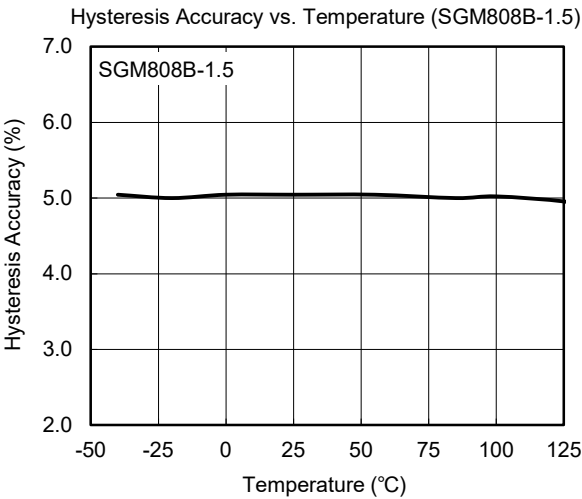
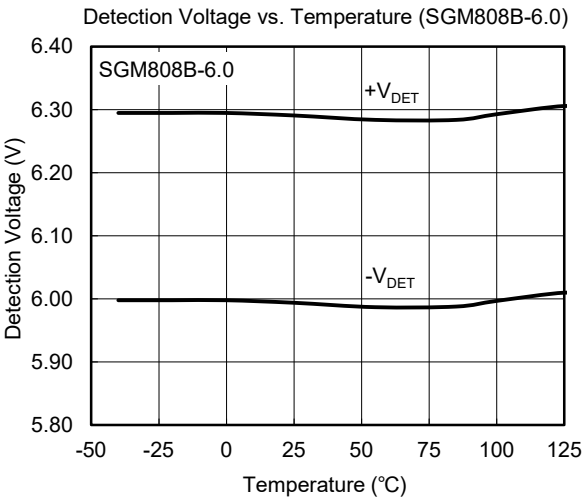
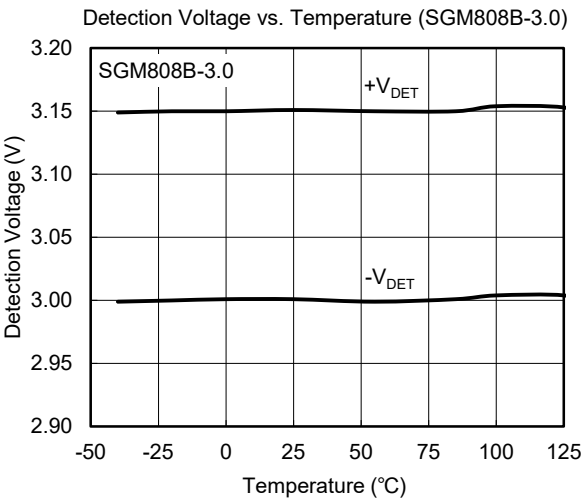
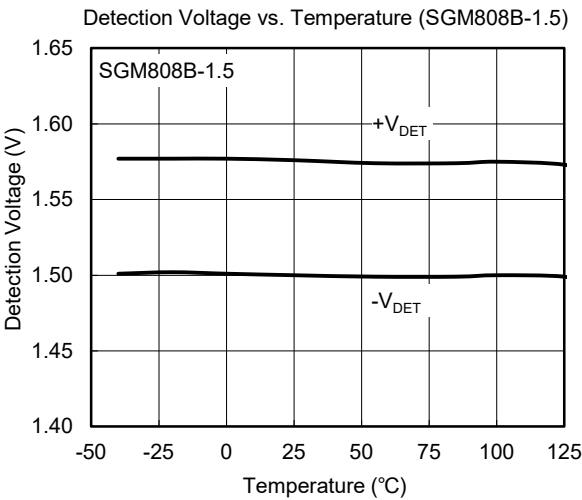


Test Circuit 2

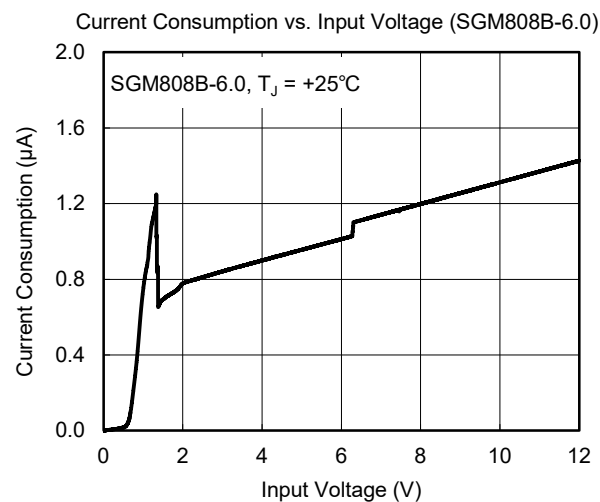
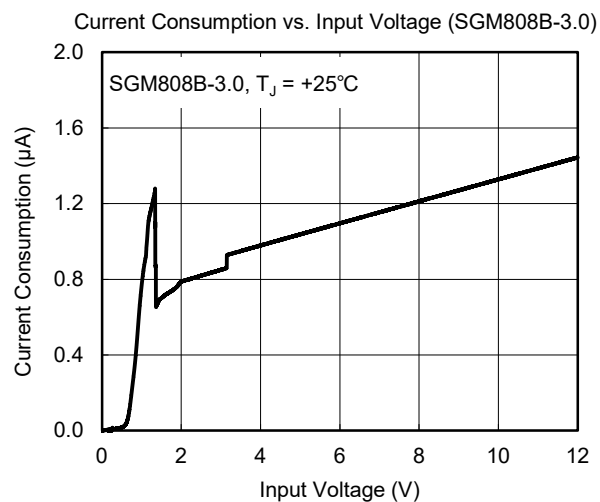
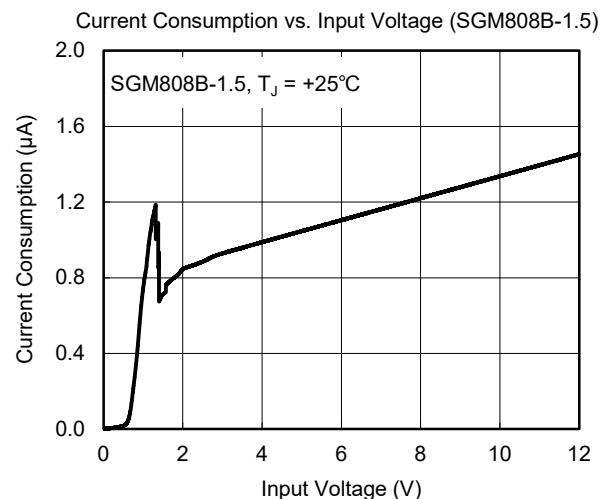
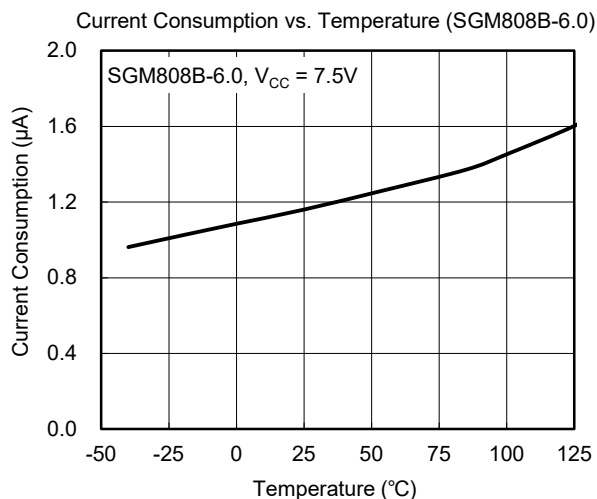
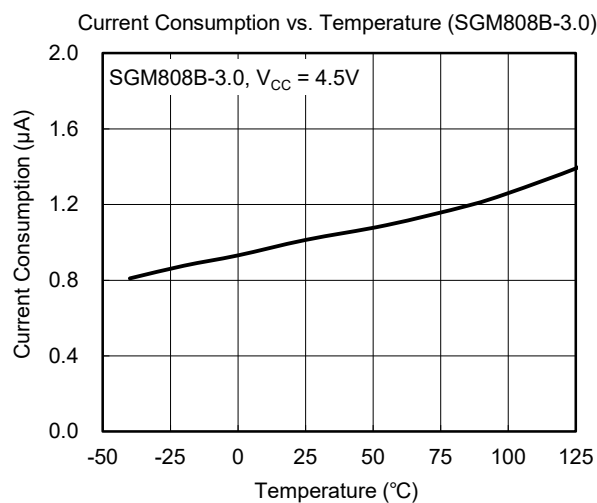
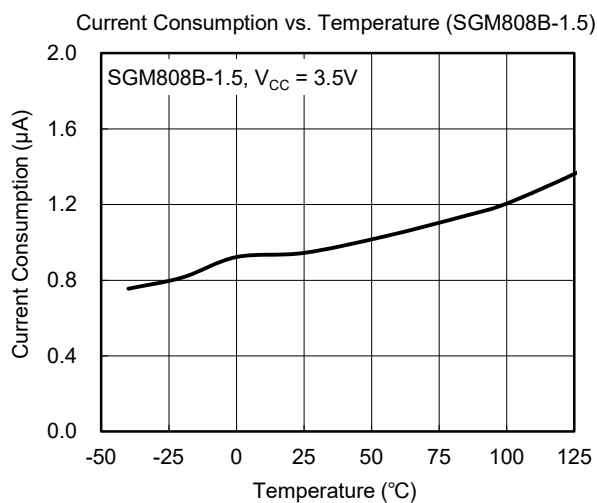


Test Circuit 3

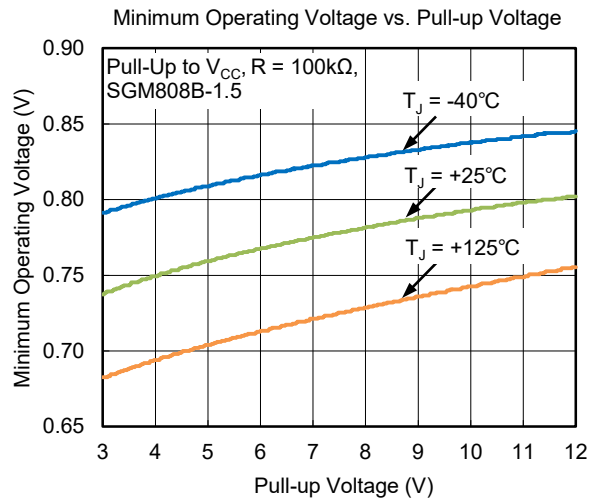
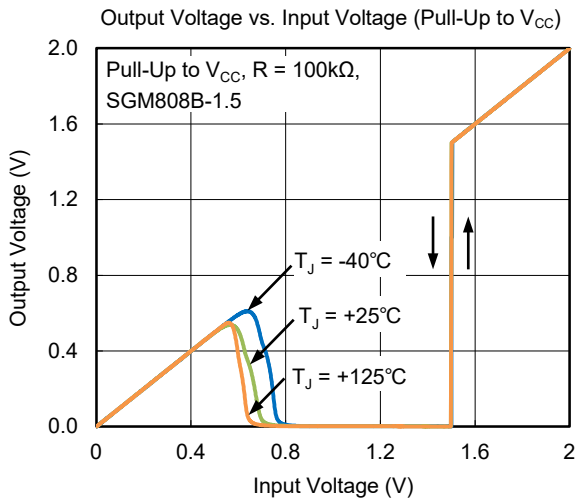
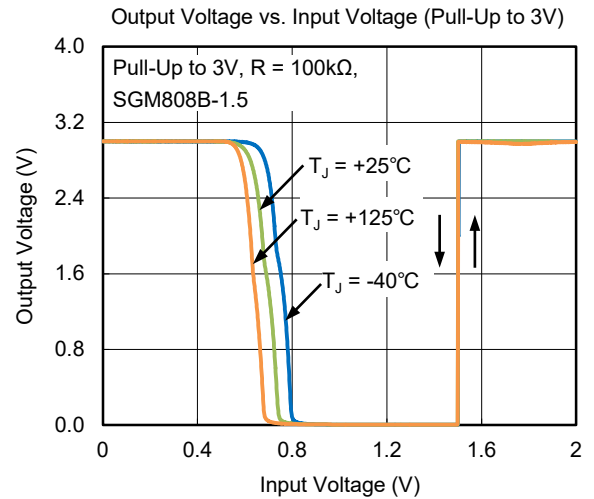
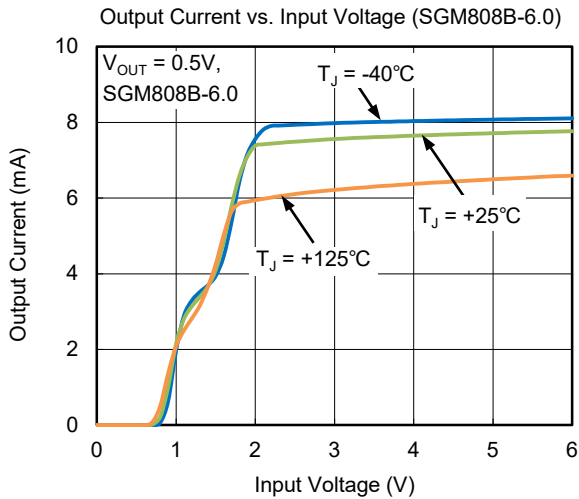
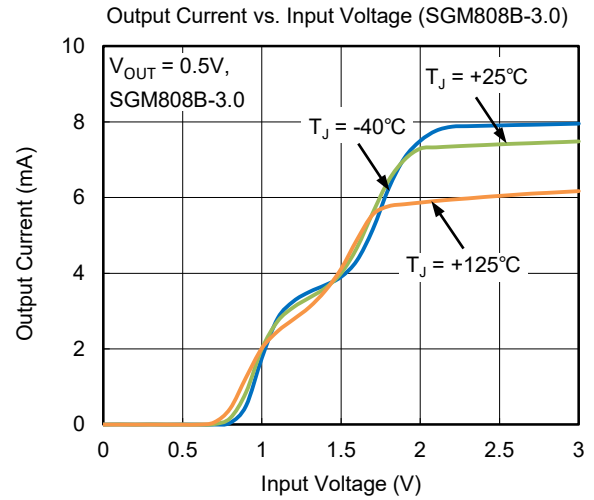
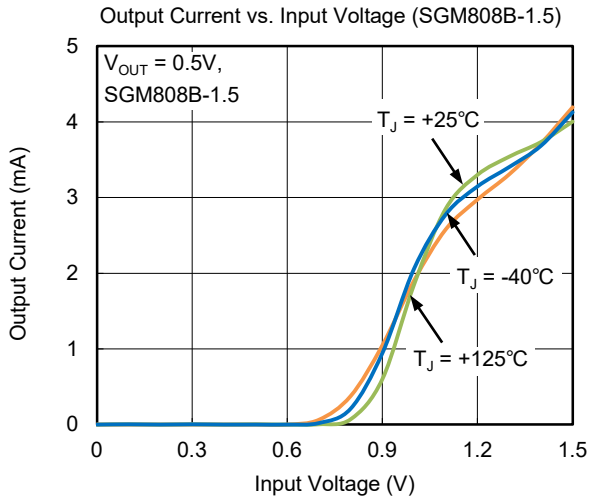
TYPICAL PERFORMANCE CHARACTERISTICS



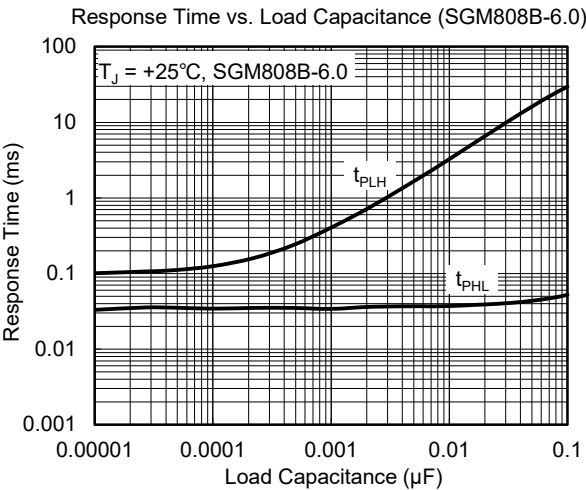
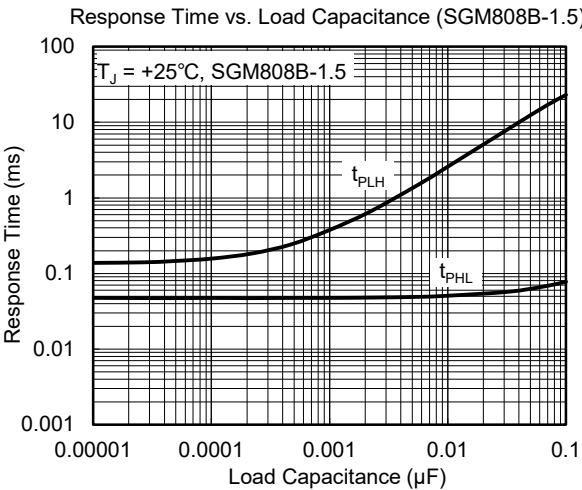
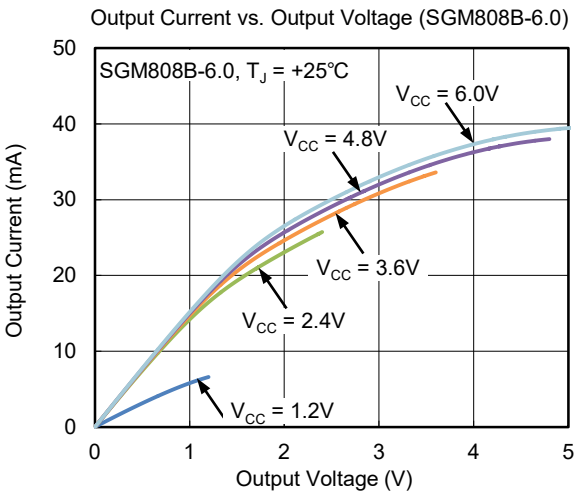
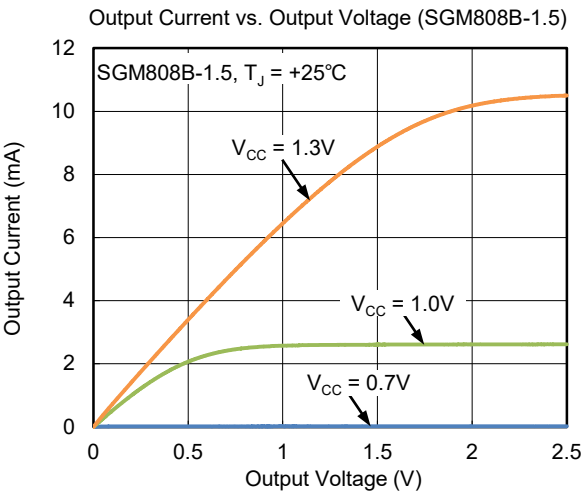
TYPICAL PERFORMANCE CHARACTERISTICS (continued)



TYPICAL PERFORMANCE CHARACTERISTICS (continued)



TYPICAL PERFORMANCE CHARACTERISTICS (continued)



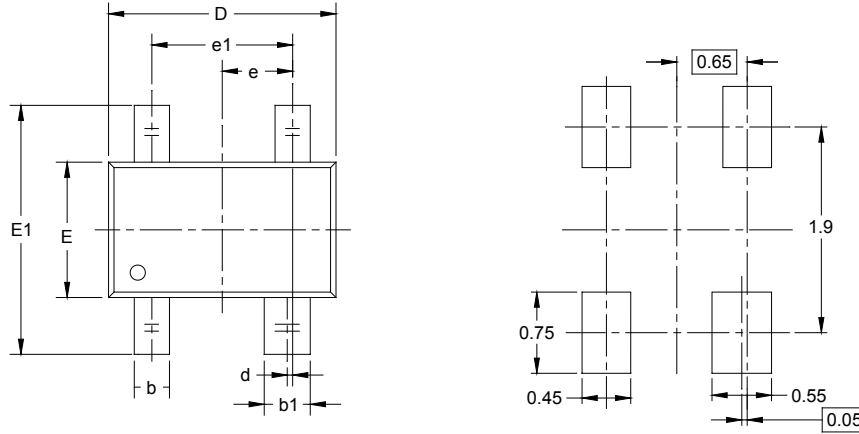
REVISION HISTORY

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

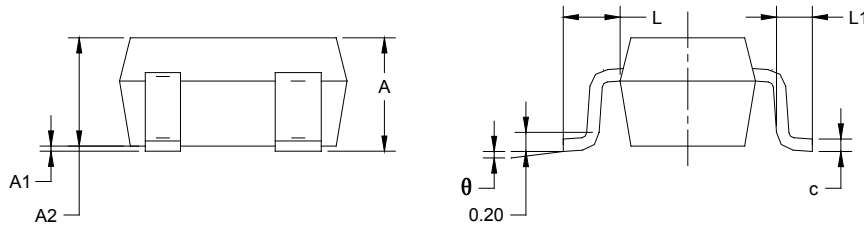
Changes from Original (JUNE 2021) to REV.A	Page
Changed from product preview to production data.....	All

PACKAGE OUTLINE DIMENSIONS

SC70-4 (R)



RECOMMENDED LAND PATTERN (Unit: mm)

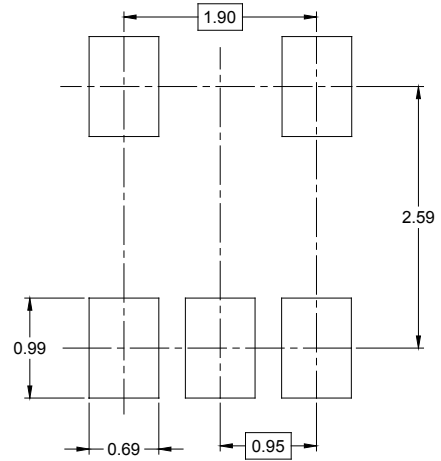
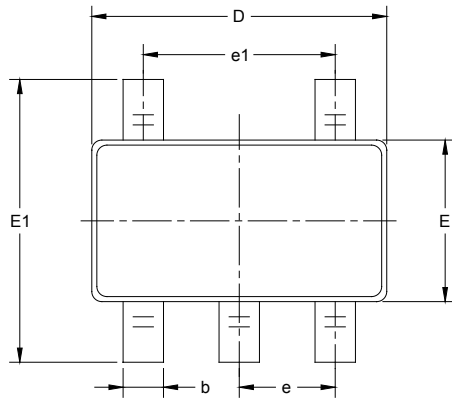


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MIN	MAX	MIN	MAX
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.250	0.400	0.010	0.016
b1	0.350	0.500	0.014	0.020
c	0.080	0.150	0.003	0.006
d	0.050TYP		0.002TYP	
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.65 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

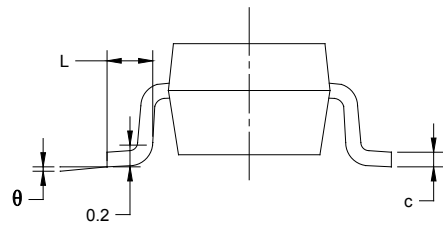
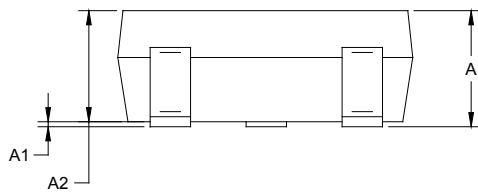
PACKAGE INFORMATION

PACKAGE OUTLINE DIMENSIONS

SOT-23-5



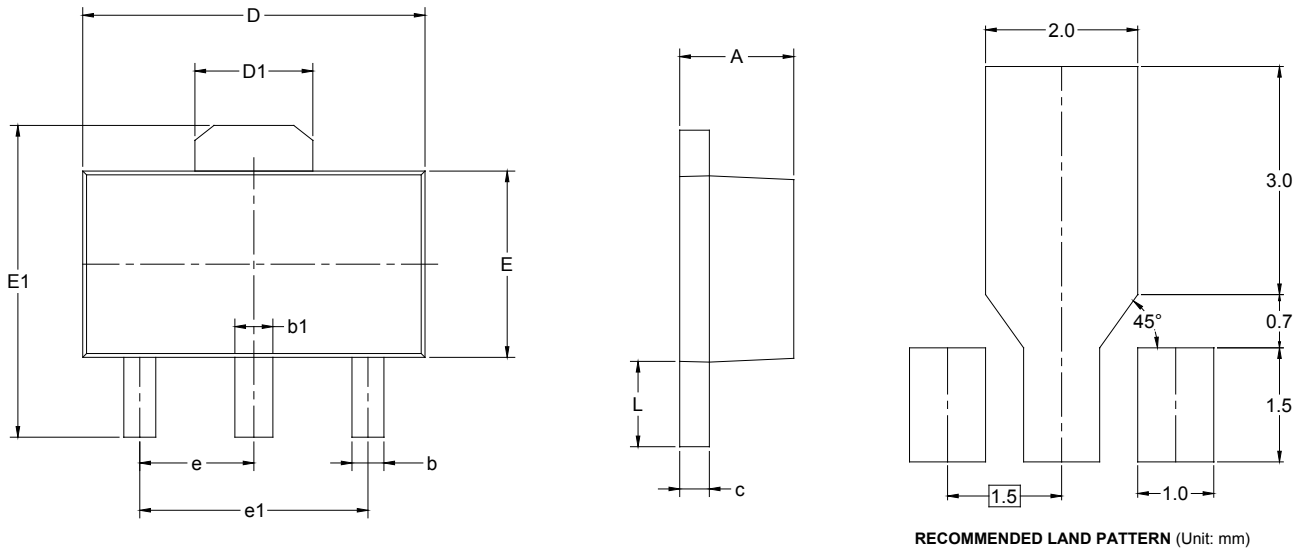
RECOMMENDED LAND PATTERN (Unit: mm)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MIN	MAX	MIN	MAX
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950 BSC		0.037 BSC	
e1	1.900 BSC		0.075 BSC	
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

PACKAGE OUTLINE DIMENSIONS

SOT-89-3

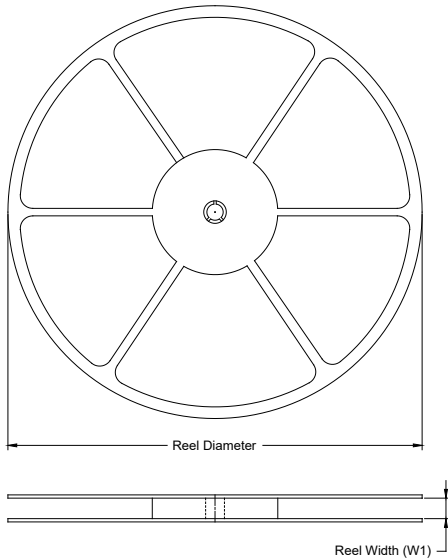


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MIN	MAX	MIN	MAX
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF		0.061 REF	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP		0.060 TYP	
e1	3.000 TYP		0.118 TYP	
L	0.900	1.200	0.035	0.047

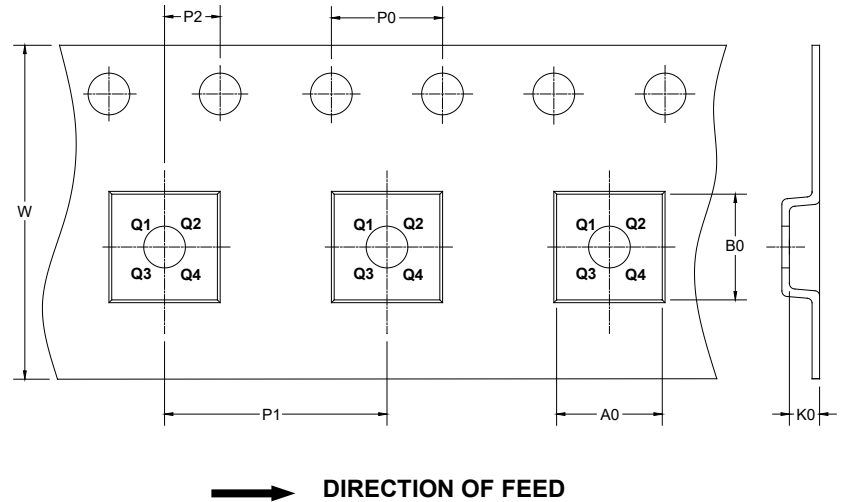
PACKAGE INFORMATION

TAPE AND REEL INFORMATION

REEL DIMENSIONS



TAPE DIMENSIONS



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

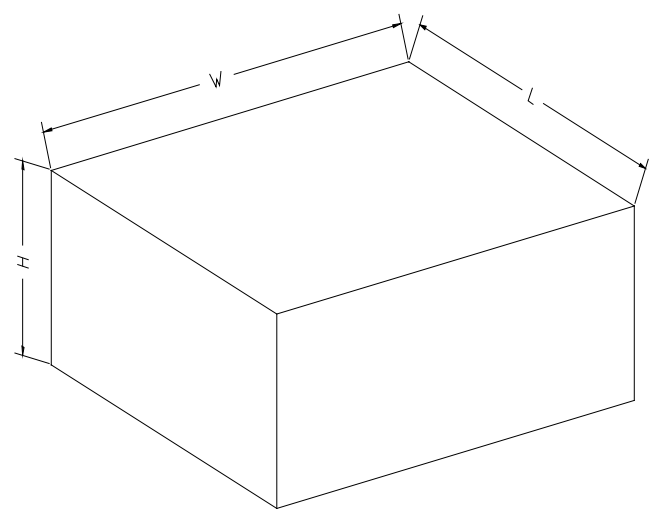
KEY PARAMETER LIST OF TAPE AND REEL

Package Type	Reel Diameter	Reel Width W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P0 (mm)	P1 (mm)	P2 (mm)	W (mm)	Pin1 Quadrant
SC70-4 (R)	7"	9.5	3.20	2.80	1.30	4.0	4.0	2.0	8.0	Q3
SOT-23-5	7"	9.5	3.20	3.20	1.40	4.0	4.0	2.0	8.0	Q3
SOT-89-3	7"	13.2	4.85	4.45	1.85	4.0	8.0	2.0	12.0	Q3

DD0001

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

DD0002