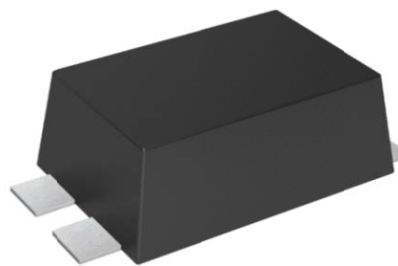


Features

- Excellent capability of absorbing transient surge
- Quick response to surge voltage (nS Level)
- Eliminates overvoltage caused by fast rising transients
- Moisture sensitivity level: level 1
- Weight 420 mg
- Non degenerative
- Bi-directional

Exterior

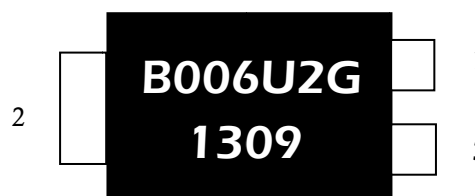


SMC-T

Application information

- RS485

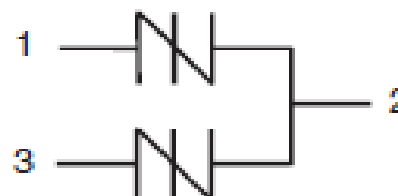
Package (top view)



Agency Approvals

Icon	Description
<b>RoHS</b>	Compliance with 2011/65/EU
<b>HF</b>	Compliance with IEC61249-2-21:2003

Schematic Symbol



Part Number and Electrical Parameter

Part Number	IDRM@VDRM		Vs <sup>①</sup> @ Is		VT@ IT		IH	Co <sup>②</sup>
	μA	V	V	mA	V	A	mA	pF
	MAX	Pin1,3-2	Pin1,3-2		MAX		MIN	MAX
BS0060U-2G	5	6	25	800	4	2.2	50	500

Absolute maximum ratings measured at TA= 25°C RH = 45%-75% (unless otherwise noted).

①Vs is measured at 100KV/S

② Off-state Capacitance is measured at VDC=2V, VRMS=1V, f=1MHz

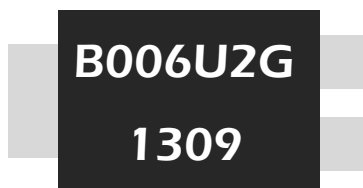
Thyristor Surge Suppressor

Part Numbering System

BS 0060 U - 2 G  
(1) (2) (3) (4) (5)

- (1) Bencent Semiconductor Surge Arrester
- (2) Off state Voltage, e.g: 0060 =  $6 \times 10^0 = 6V$ .
- (3) Package : SMC-T
- (4) 2 Lines Protection
- (5) Rating Surge Voltage: 3KA (8/20 $\mu$ S)

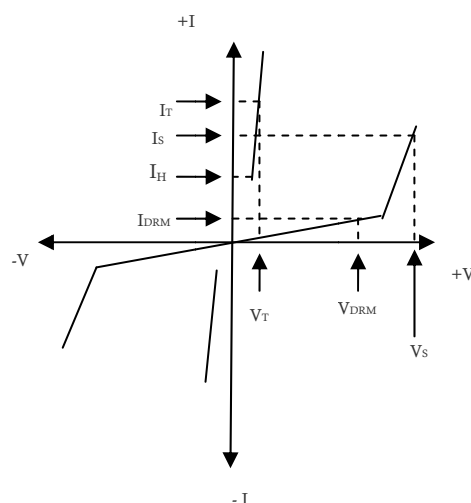
Mark



B006U2G: Part Number  
1309 : Septempr, 2013

V-I Curve

Parameters	Definition
V <sub>DRM</sub>	Peak Off-state Voltage
I <sub>DRM</sub>	Off-state Current
V <sub>S</sub>	Switching Voltage
I <sub>S</sub>	Switching Current
I <sub>H</sub>	Holding Current
V <sub>T</sub>	On-state Voltage
I <sub>T</sub>	On-state Current
C <sub>O</sub>	Off-state Capacitance



Surge Ratings

Current Waveform	8/20 $\mu$ s
Voltage Waveform	1.2/50 $\mu$ s
I <sub>pp</sub>	3KA

- Peak pulse current rating (I<sub>PP</sub>) is repetitive and guaranteed for the life of the product;
- Bencent only makes the test for 8/20 $\mu$ s@3KA, but for other IPP value derived from experience is just for reference only.

Thermal Considerations

Symbol	Parameter	Value	Unit
T <sub>J</sub>	Operating Junction Temperature Range	-40 to +150	°C
T <sub>S</sub>	Storage Temperature Range	-60 to +150	°C

Physical Characteristics

Lead Material	Copper Alloy
Body Material	UL recognized epoxy meeting flammability classification 94V-0
Terminal Finish	100% Matte-Tin Plated

Thyristor Surge Suppressor

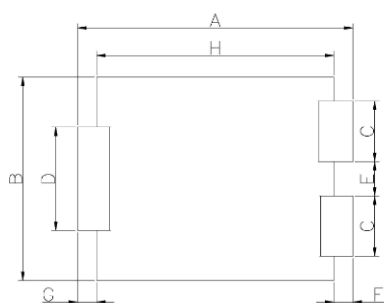
Version: A0 2014-03-21

Environmental Characteristics

Testing Items	Technical Standards
High Temperature Reverse Bias Test	Temperature: 150±3℃, Bias=80%V <sub>DRM</sub> Time:168H
High Temperature Life Test	Temperature: 150℃ Time:168H
High-low Temperature Cycle Test	Temperature:From -40℃ to125℃ Dwell time: 30min, 10-100 cycles
High Temperature &High Humidity Test	Temperature: 85℃Humidity:85% Test time:168H
Pressure Cooker Test	Temperature: 121℃, 2atm. Humidity:100% Test time: 24H to 168H
Resistance of Soldering Heat	Temperature: 260±5℃ Time of dip soldering: 10s, 3times

Note: The above testing items can be specified by customers by contacting Bencent service

Product Dimensions



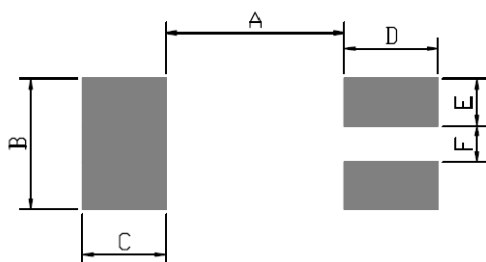
Bottom view



Side view

REF	mm	inch
A	8.0±0.3	0.315±0.012
B	5.9±0.3	0.232±0.012
C	1.75±0.03	0.069±0.001
D	3.0±0.2	0.118±0.008
E	1.0±0.2	0.039±0.008
F	0.55±0.1	0.022±0.004
G	0.55±0.1	0.022±0.004
H	6.9±0.3	0.272±0.012
J	0.25±0.05	0.010±0.002
I	2.0±0.2	0.079±0.008

Recommended Soldering Pad



REF	mm	inch
A	6.0	0.236
B	3.4	0.134
C	1.2	0.047
D	1.2	0.047
E	2.2	0.087
F	0.6	0.024

Reflow Profile

Reflow Condition		Pb-Free Assembly
Pre Heat	Temperature Min.	+150°C
	Temperature Max.	+200°C
	Time(Min to Max)	60 – 180 secs.
Average ramp up rate(Liquidus Temp( $T_L$ ) to peak)		3°C/sec. Max.
Ts(max) to $T_L$ - Ramp-up Rate		3°C/sec. Max.
Reflow	- Temperature ( $T_L$ ) (Liquidus)	+217°C
	- Temperature ( $T_L$ )	60 – 150 secs.
Peak Temp ( $T_P$ )		+(260+0/-5)°C
Time within 5°C of actual Peak Temp ( $T_P$ )		8 – 15 secs.
Ramp-down Rate		6°C/sec. Max.
Time 25°C to peak Temp ( $T_P$ )		8 min. Max.
Do not exceed		+260°C

