BS0060U-2G

Order Code: BS0060U-2G

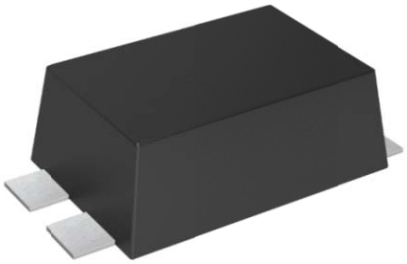
Thyristor Surge Suppresser

Version: A0 2014-03-21

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

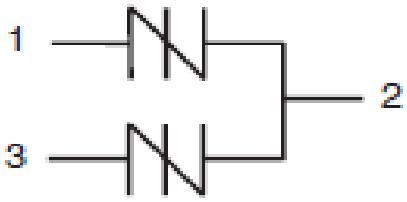
- RS485

Package (top view)

Agency Approvals

Icon	Description
RoHS	Compliance with 2011/65/EU
HF	Compliance withIEC61249-2-21:2003

Schematic Symbol



Part Number and Electrical Parameter

Part Number	I_{DRM}@V_{DRM}		V_S①@ I_S		V_T@ I_T		I_H	C_O②
	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 T_A= 25ºC RH = 45%-75% (unless otherwise noted).

①Vs is measured at 100KV/S

② Off-state Capacitance is measured at V_{DC}=2V, V_{RMS}=1V, f=1MHz

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Part Numbering System

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

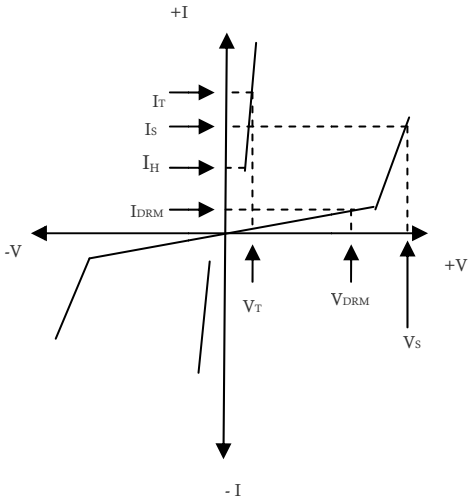
(1)Bencent Semiconductor Surge Arrester
(2)Off state Voltage,e.g:0060=6×10^{0}=6V.
(3) Package : SMC-T
(4) 2 Lines Protection
(5) Rating Surge Voltage: 3KA (8/20μS)

Mark

B006U2G: Part Number
1309 :Septempter,2013

V-I Curve

Parameters	Definition
V_{DRM}	Peak Off-state Voltage
I_{DRM}	Off-state Current
V_S	Switching Voltage
I_S	Switching Current
I_H	Holding Current
V_T	On-state Voltage
I_T	On-state Current
C_O	Off-state Capacitance



Surge Ratings

Current Waveform	8/20μs
Voltage Waveform	1.2/50μs
Ipp	3KA

-Peak pulse current rating (I_{PP}) is repetitive and guaranteed for the life of the product;
-Bencent only makes the test for 8/20μs@3KA, but for other IPP value derived from experience is just for reference only.

Thermal Considerations

Symbol	Parameter	Value	Unit
T_J	Operating Junction Temperature Range	-40 to +150	℃
T_S	Storage Temperature Range	-60 to +150	℃

Physical Characteristics

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

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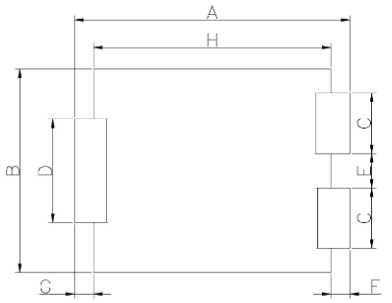
Environmental Characteristics

Testing Items	Technical Standards
High Temperature Reverse Bias Test	Temperature: 150±3℃, Bias=80%V_{DRM} 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

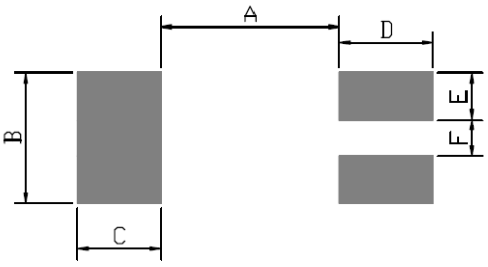


Bottom view

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.
$T_{S(max)}$ 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