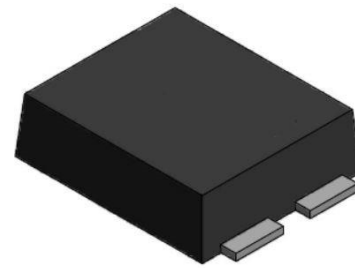


Features

- 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
- Non degenerative
- Weight: 360mg
- Bi-directional

Exterior

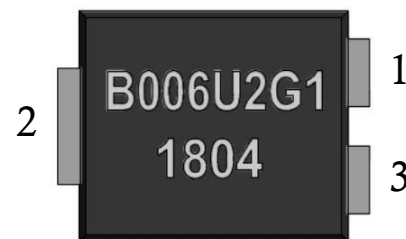


SMC-T

Application Information

- RS485

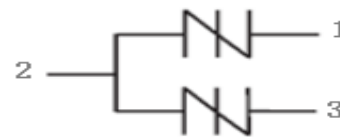
Package (top view)



Agency Approvals

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

Schematic Symbol



Part Number and Electrical Parameter

Part Number	IDRM@VDRM			VS ^① @ IS		VT@ IT		IH	IH	CO ^②	
	μA	μA	V	V	mA	V	A	mA	mA	pF	
	TA=25°C	TA=125°C								TA=25°C	TA=125°C
	MAX	MAX	Pin1,3-2	Pin1,3-2		MAX		MIN	MIN	MIN	MAX
BS0060U-2G-1	5	20	6	25	800	4	2.2	50	40	400	700

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 V_{DC}=2V, V_{RMS}=1V, f=1MHz

Part Numbering System

BS 0060 U - 2 G - 1

(1) (2) (3) (4) (5) (6)

(1) Bencent Semiconductor Surge Arrester

(2) Off state Voltage=6V.

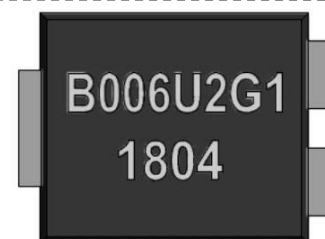
(3) Package: SMC-T

(4) 2 Lines Protection

(5) Rating Surge Voltage: 3KA (+15%) (8/20μS)

(6) Internal Contorl

Mark



B006U2G1: Part Number

1804: April 2018

Specifications are subject to change without notice.

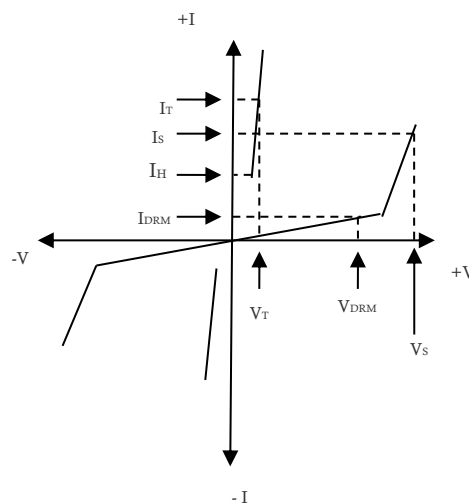
Customers should verify actual device performance in their specific applications

Thyristor Surge Suppressor

Version: A1 2023/02/17

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	8/20 μ s
Voltage Waveform	1.2/50 μ s
I_{pp}	3KA (+15%)

-Peak pulse current rating (I_{pp}) is repetitive and guaranteed for the life of the product;

Thermal Considerations

Symbol	Parameter	Value	Unit
T_J	Operating Junction Temperature Range	-40 to +125	$^{\circ}$ C
T_S	Storage Temperature Range	-40 to +125	$^{\circ}$ C

Physical Characteristics

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

Environmental Characteristics

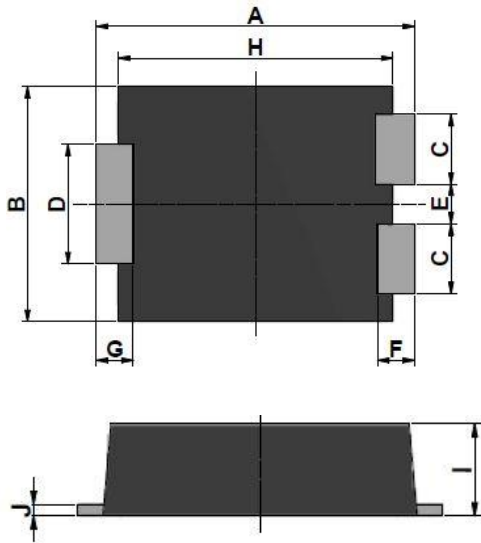
Testing Items	Technical Standards
High Temperature Reverse Bias Test	Temperature: 125 $\pm$ 3 $^{\circ}$ C, Bias=80% V_{DRM} Time: 168H
High Temperature Life Test	Temperature: 125 $^{\circ}$ C Time: 168H
High-low Temperature Cycle Test	Temperature: From -40 $^{\circ}$ C to 125 $^{\circ}$ C Dwell time: 30min, 100 cycles
High Temperature & High Humidity Test	Temperature: 85 $^{\circ}$ C Humidity: 85% Test time: 168H
Pressure Cooker Test	Temperature: 121 $^{\circ}$ C, 2atm. Humidity: 100% Test time: 24H
Resistance of Soldering Heat	Temperature: 260 $\pm$ 5 $^{\circ}$ C Time of dip soldering: 10s, 3times

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

Thyristor Surge Suppressor

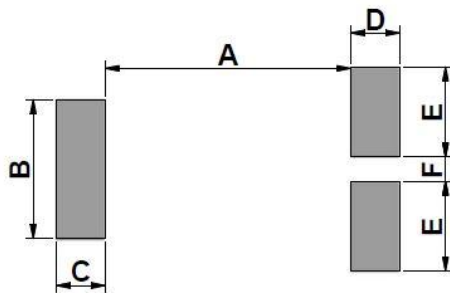
Version: A1 2023/02/17

Product Dimensions



REF	mm	inch
A	8.0±0.3	0.315±0.012
B	5.9±0.3	0.232±0.012
C	1.75±0.1	0.069±0.004
D	3.0±0.2	0.118±0.008
E	1.0±0.2	0.039±0.008
F	0.8±0.25	0.031±0.010
G	0.8±0.25	0.031±0.010
H	6.9±0.3	0.272±0.012
I	2.0±0.2	0.079±0.008
J	0.25±0.05	0.010±0.002

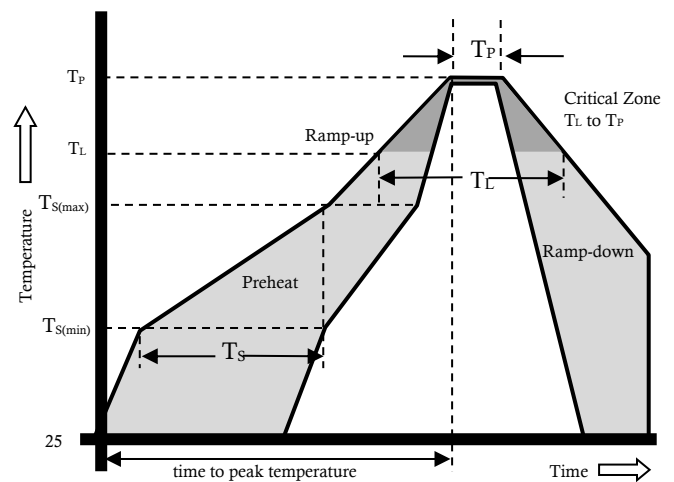
Recommended Soldering Pad



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

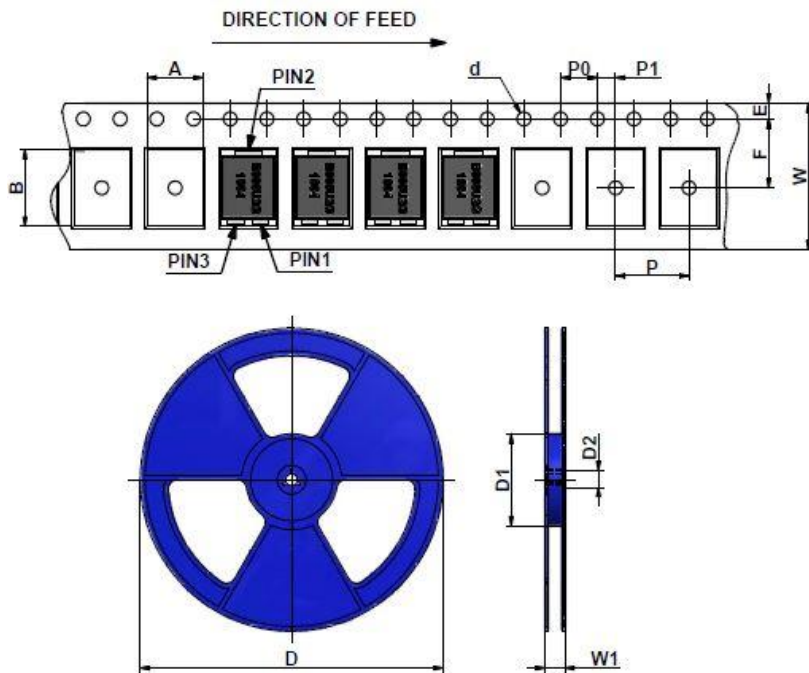
Reflow Condition		Pb-Free Assembly
Pre Heat	Temperature Min.	+150°C
	Temperature Max.	+200°C
	Time (Min to Max)	60 – 180 secs.
Average ramp up rate (Liquidus Temp(T _L) to peak)		3°C/sec. Max.
Ts(max) to T _L - Ramp-up Rate		3°C/sec. Max.
Reflow	- Temperature (T _L) (Liquidus)	+217°C
	- Temperature (T _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



Thyristor Surge Suppressor

Version: A1 2023/02/17

Package Reel Information



REF	mm	inch
A	6.05 ± 0.2	0.238 ± 0.008
B	8.3 ± 0.2	0.327 ± 0.008
d	1.5 ± 0.15	0.059 ± 0.006
D	type330.0	type13.0
D1	99 ± 1	3.898 ± 0.039
D2	13.3 ± 0.5	0.524 ± 0.020
E	1.75 ± 0.2	0.069 ± 0.008
F	7.5 ± 0.2	0.295 ± 0.008
P	8.0 ± 0.1	0.315 ± 0.004
P0	4.0 ± 0.1	0.157 ± 0.004
P1	2.0 ± 0.1	$0.079 \pm .004$
W	16.0 ± 0.5	0.630 ± 0.020
W1	21.5 ± 1	0.846 ± 0.039

OUTLINE	REEL (PCS)	PER CARTON (PCS)	REEL DIAMETERS (mm)	CARTON SIZE(mm)		
				L	W	H
TAPING	3,000	48,000	330	360	360	385