BS2300N-C

Order Code: BS2300N-C

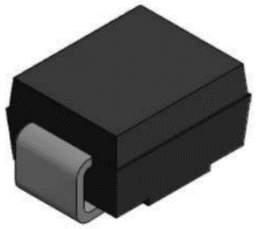
Thyristor Surge Suppresser

Version: A0 2017-12-11

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: 100mg
- Non degenerative
- Bi-directional
-

Exterior



DO214AA（SMB）

Application Information

- RJ11

Package (top view)

Agency Approvals

Icon	Description
RoHS	Compliance with 2011/65/EU
HF	Compliance withIEC61249-2-21:2003
.RU	Compliance with UL497B, Certificated E232249

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		MAX		MAX		MIN	MAX
BS2300N-C	5	190	260	800	4	2.2	150	45

Absolute maximum ratings measured at T_A= 25ºC RH = 45%-75% (unless otherwise noted).

① Vs is measured at 100KV/S

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

Thyristor Surge Suppresser

Part Numbering System

BS	2300	N	-C
(1)	(2)	(3)	(4)

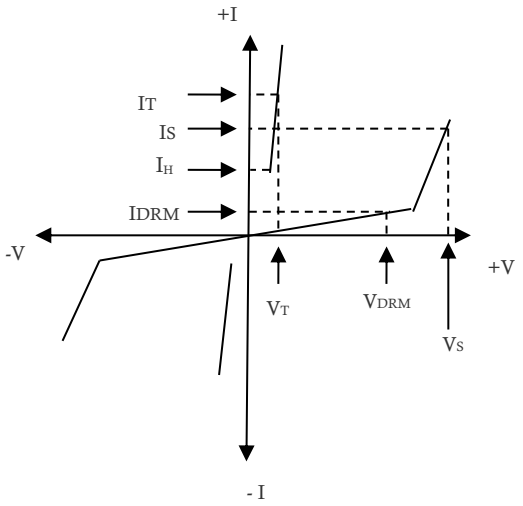
(1) Bencent Semiconductor Surge Arrester
(2) Off-state Voltage, e.g.: 2300=230×10^0=230V
(3) Package: DO214AA(SMB)
(4) Rating Surge Voltage: 6KV (10/700μs)

Mark

B23NC: Part Number

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	5/320μs	10/1000μs
Voltage Waveform	1.2/50μs	10/700μs	10/1000μs
Ipp	300A	150A	100A

Peak pulse current rating (I_{PP}) is repetitive and guaranteed for the life of the product;
-Bencent only makes the test for10/700μs@150A, but for other IPP value derived from experience is just for reference only. Bencent will not take any obligation for these parameters, so before applying our parts, please make sure to verify the parameters listed in the above table.

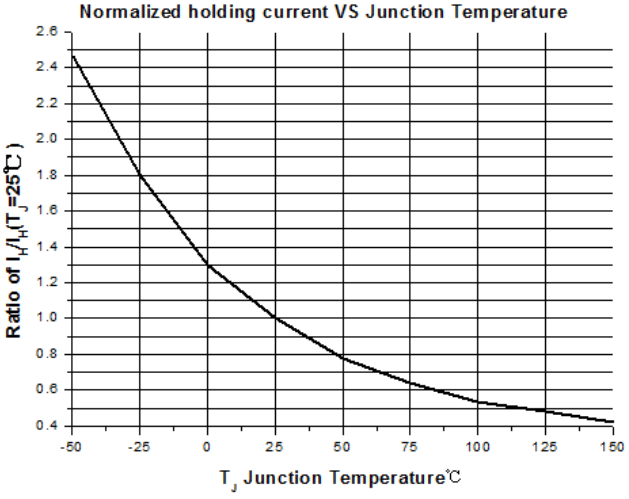
Thermal Considerations

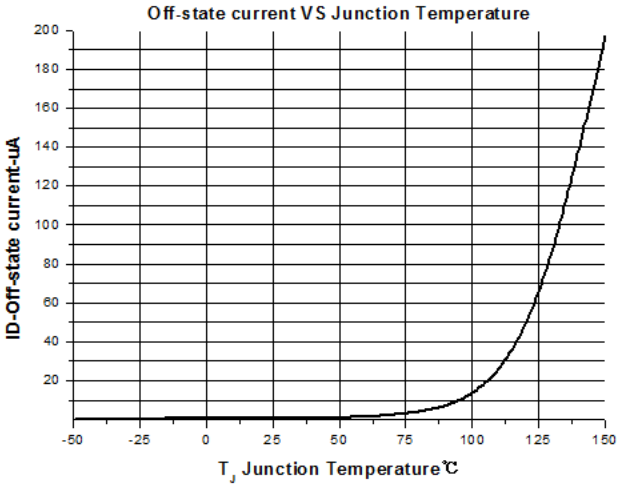
Symbol	Parameter	Value	Unit
T_J	Operating Junction Temperature Range	-40 to +150	℃
T_S	Storage Temperature Range	-60 to +150	℃

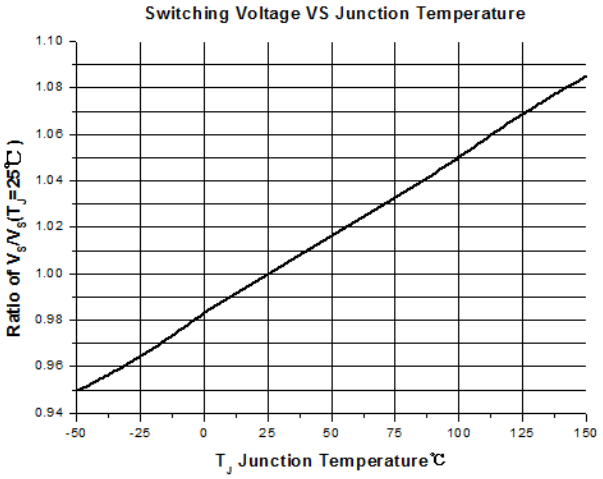
Physical Characteristics

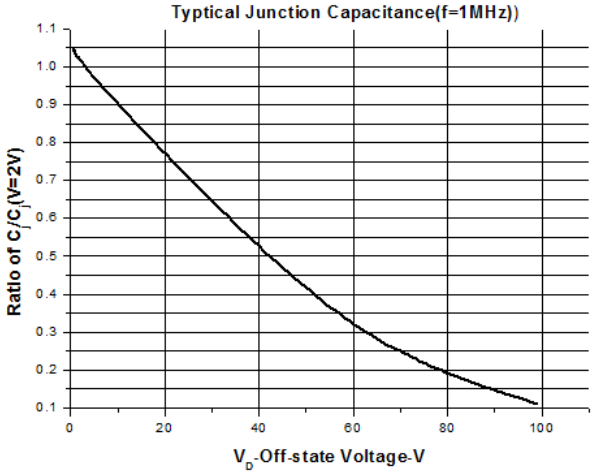
Lead Material	Copper Alloy
Body Material	UL recognized epoxy meeting flammability classification 94V-0
Terminal Finish	100% Matte-Tin Plated

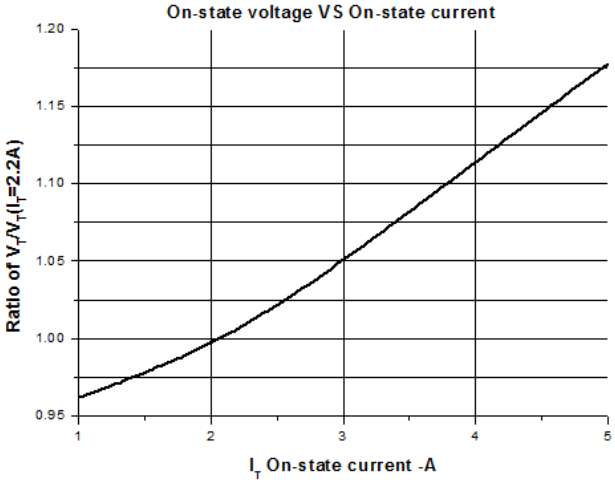
Typical Characteristics







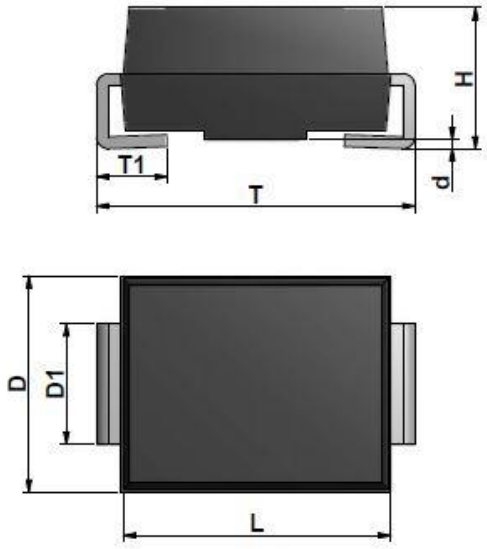




Thyristor Surge Suppresser

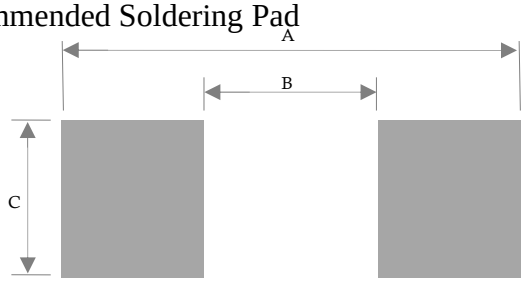
Version: A0 2017-12-11

Product Dimensions



REF.	mm	inch
D	3.6±0.3	0.142±0.012
D1	2±0.15	0.079±0.006
L	4.6±0.3	0.181±0.012
T	5.4±0.3	0.213±0.012
T1	1.1±0.3	0.043±0.012
d	0~0.4	0~0.016
H	2.10~2.60	0.083~0.102

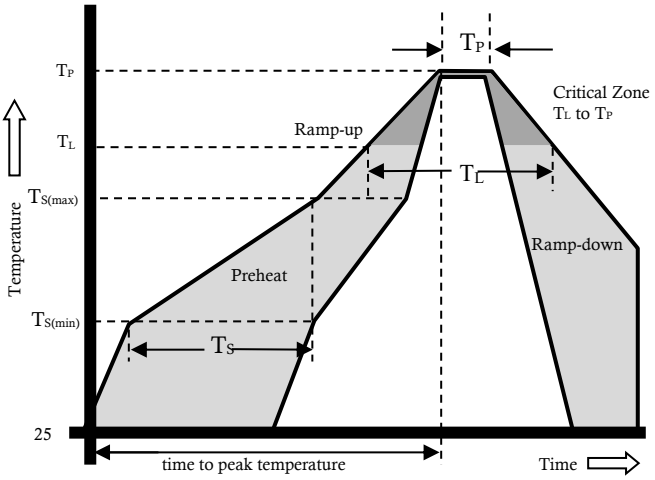
Recommended Soldering Pad



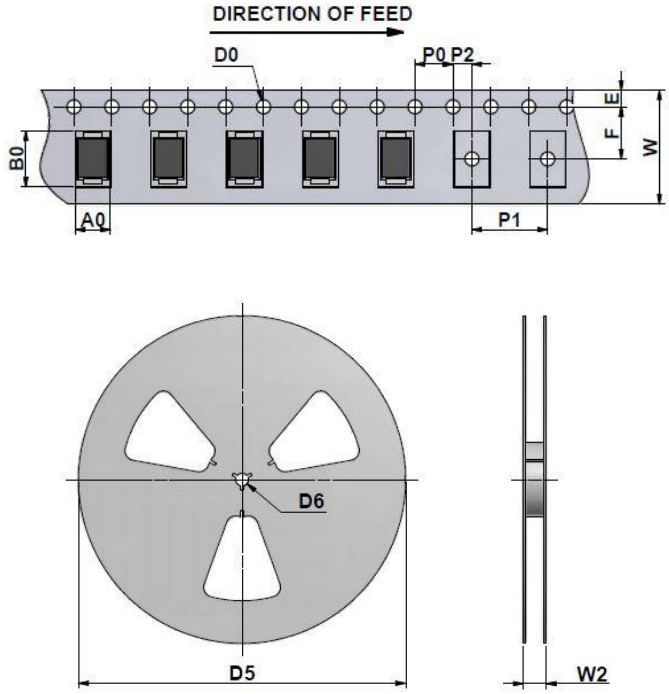
REF	mm	inch
A	5.45	0.215
B	2.45	0.096
C	2.15	0.085

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 – 15secs.
Ramp-down Rate		6°C/sec.Max.
Time 25°C to peak Temp (T_P)		8 min. Max.
Do not exceed		+260°C



Package Reel Information



REF.	mm	inch
W	12±1	0.472±0.039
E	1.75±0.3	0.069±0.012
F	5.5±0.3	0.217±0.012
D0	1.55±0.15	0.061±0.006
D1	1.5±0.2	0.059±0.008
P0	4.0±0.2	0.157±0.008
P1	8.0±0.2	0.315±0.008
P2	2.0±0.2	0.079±0.008
A0	3.6±0.3	0.142±0.012
B0	5.7±0.3	0.224±0.012
D5	Ø330	Ø13
D6	Ø13.5±1.0	Ø0.531±0.039
W2	18±2.0	0.709±0.079

Outline	Reel (pcs)	Per Carton (pcs)	Reel Diameters (mm)	Carton Size(mm)		
				L	W	H
Taping	3,000	48,000	330	360	360	385