

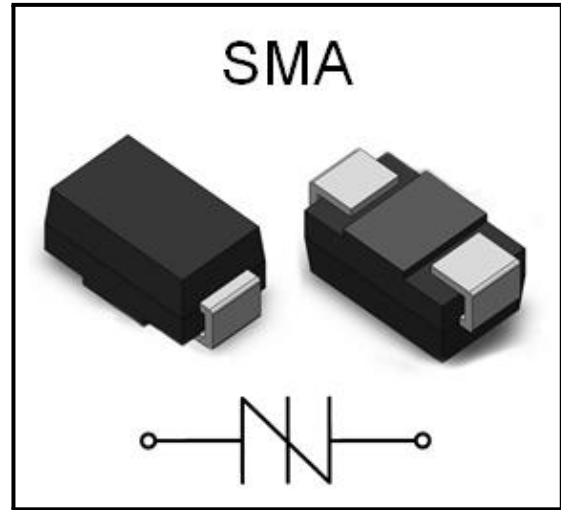
BEPxxxxTA

Thyristor Surge Suppressor

Features

- Silicon technology
- Cannot be damaged by voltage
- Low capacitance
- Eliminate voltage overshoot
- Epoxy resin package
- Will not fatigue
- Complies with following standards:
 - GR1089
 - ITU K.20, K.21 and K.45
 - IEC 60950
 - UL 60950
 - TIA-968
- RoHS Compliant

Package



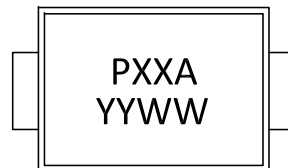
Mechanical Characteristics

- Package: SMA plastic package.
- Lead Finish: Matte Tin
- Case Material: Epoxy Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020

Applications

- COMMERCIAL SYSTEMS
- INDUSTRIAL & INSTRUMENTATION
- COMMUNICATIONS

Making Information



PXXA=Type Code
YYWW=Date Code

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SMA	Tape/Reel, 13" reel	5000	EIA-481-1
	Tape/Reel, 7" reel	2000	EIA-481-1

**BORN SEMICONDUCTOR, INC. ALL
RIGHT RESERVED**

Specifications are subject to change without notice.
Please refer to <http://www.born-tw.com> for current information.

Revision: 2022-Jan-1



BEPxxxxTA

Thyristor Surge Suppressor

Absolute Maximum Ratings

Parameter	Symbol	Value	Units	Remarks
Peak Pulse Voltage	V_{PP}	3000	W	10/700us
Peak Pulse Current	I_{PP}	45	A	10/1000us
Peak Pulse Current	I_{PK}	150	A	8/20us
Peak One-cycle Surge Current	I_{TSM}	20	A	60HZ
Rate of Rise of Current	d_i/d_t	500	A/us	
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	30	°C/W	
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	120	°C/W	
Operating Temperature Range	T_J	-40 to 150	°C	
Storage Temperature Range	T_{STG}	-55 to 150	°C	

Absolute Maximum Ratings ($T_A=+25^{\circ}\text{C}$, unless otherwise noted)

Pact Number	Marking	I_H	V_S	I_{SLMT}	V_T	I_T	I_D	V_D	C_O
		(mA)	(V)	(mA)	(V)	(A)	(μA)	(V)	(pF)
		MIN.	MAX.		@ I_T		@ V_D		1MHZ,2V _{DC}
					MAX.		MAX.		TYP
BEP0080TA	P008A	40	25	500	4	2.2	5	6	18
BEP0220TA	P02A	40	30	500	4	2.2	5	15	53
BEP0300TA	P03A	40	40	500	4	2.2	5	25	50
BEP0640TA	P06A	120	77	800	4	2.2	5	58	48
BEP0720TA	P07A	120	88	800	4	2.2	5	65	48
BEP0900TA	P09A	120	98	800	4	2.2	5	78	48
BEP1100TA	P11A	120	130	800	4	2.2	5	90	45
BEP1300TA	P13A	120	160	800	4	2.2	5	120	45
BEP1500TA	P15A	120	180	800	4	2.2	5	140	43
BEP1800TA	P18A	120	220	800	4	2.2	5	170	40
BEP2300TA	P23A	120	260	800	4	2.2	5	190	38
BEP2600TA	P26A	120	300	800	4	2.2	5	220	35
BEP3100TA	P31A	120	350	800	4	2.2	5	275	33
BEP3500TA	P35A	120	400	800	4	2.2	5	320	30
BEP4200TA	P42A	120	550	800	4	2.2	5	400	23



BEPxxxTA

Thyristor Surge Suppressor

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Figure 1: Peak Pulse Current Rating

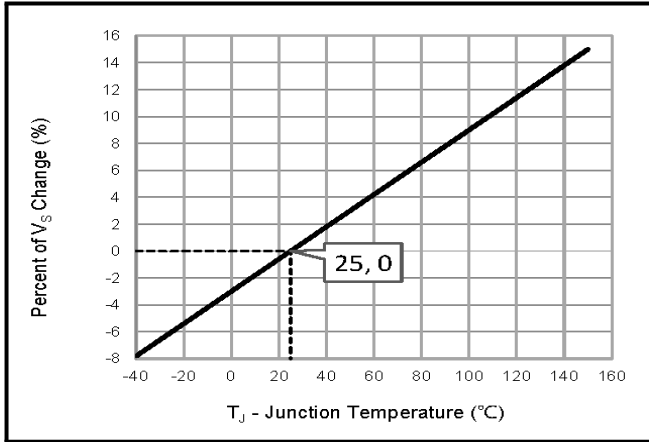


Figure 2: Normalized DC Holding Current vs. Case Temperature

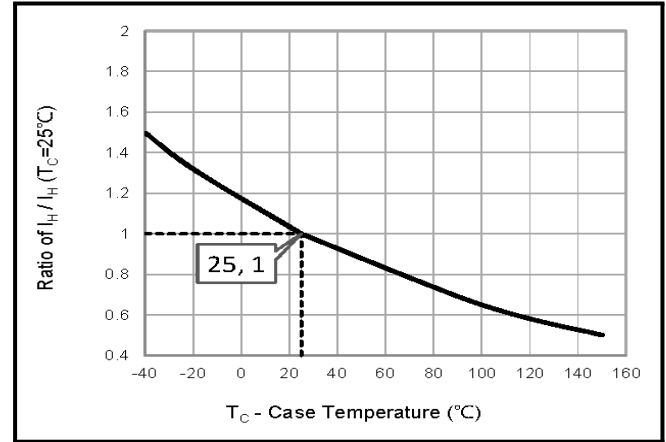


Figure 3: tr/td us Pulse Waveform

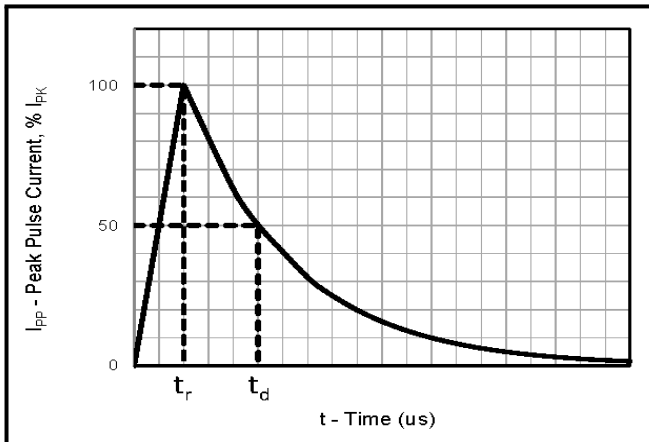


Figure 4: VI Curve

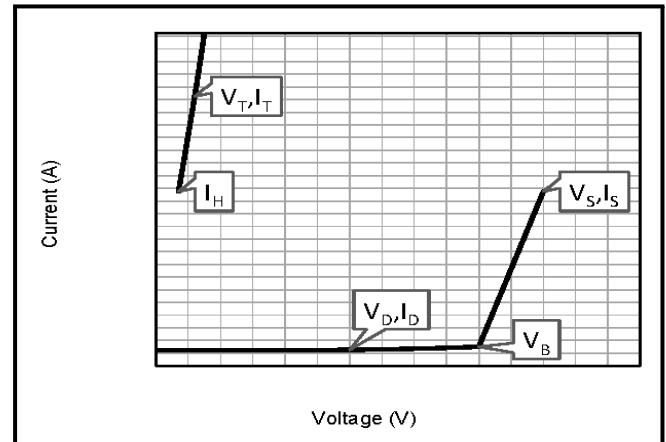


Figure 5: Peak Pulse Current Rating

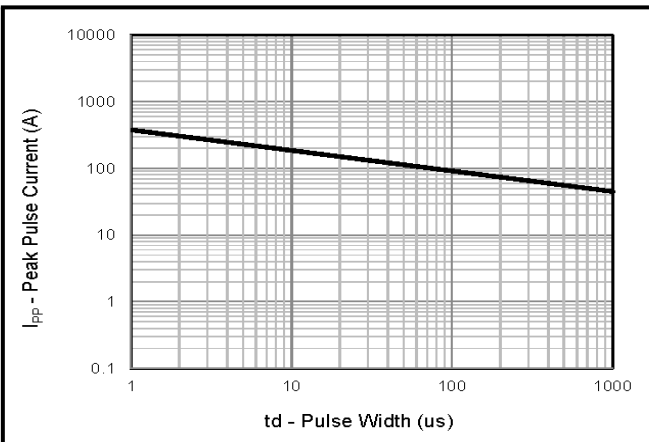
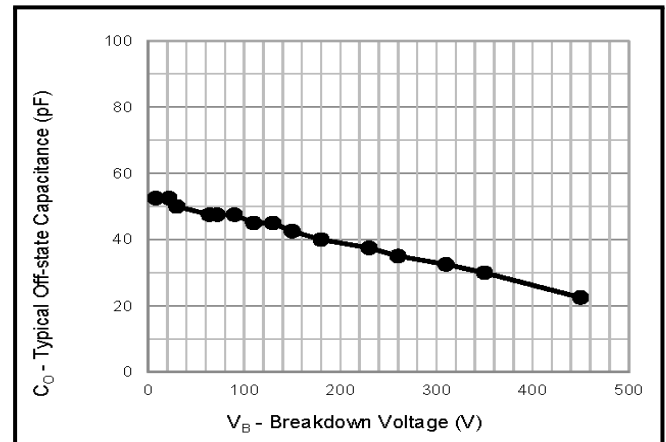


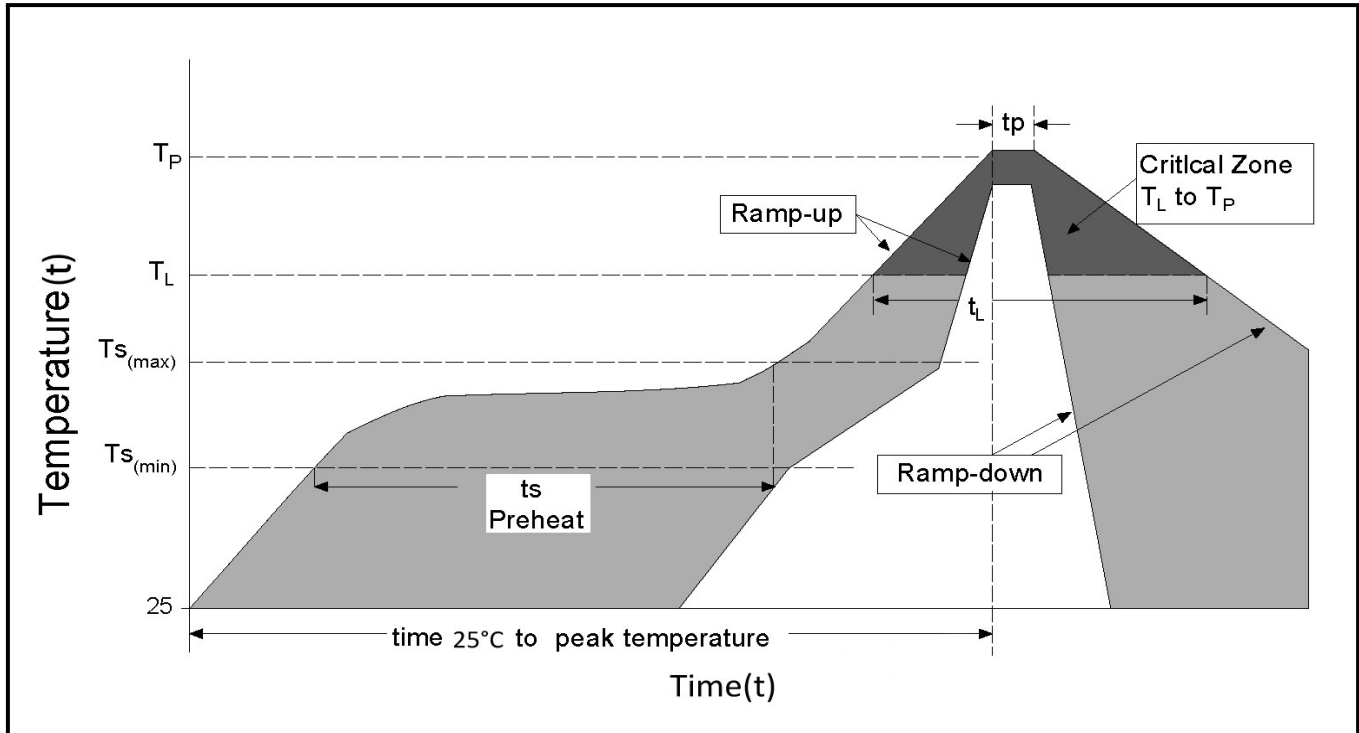
Figure 6: Typical Off-state Capacitance



BEPxxxxTA

Thyristor Surge Suppressor

Soldering Parameters



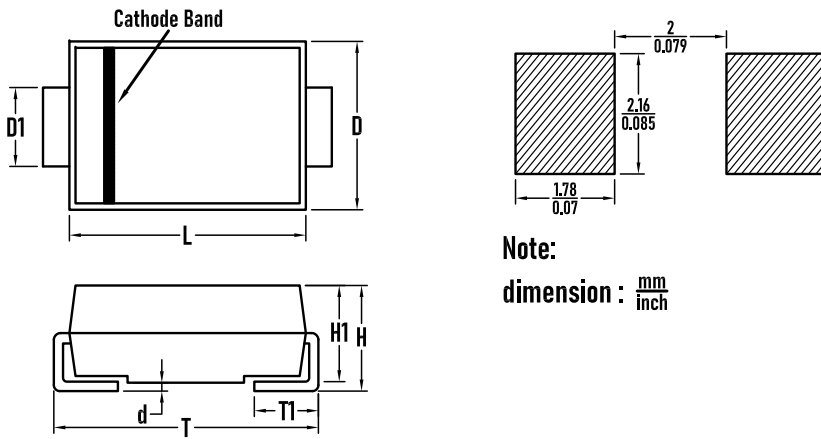
Reflow Condition		Lead-free assembly
Pre Heat	- Temperature Min ($T_{S(min)}$)	150°C
	- Temperature Max ($T_{S(max)}$)	200°C
	- Time (min to max) (t_s)	60 - 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{S(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	- Temperature (T_L) (Liquidus)	217°C
	- Time (t_L)	60 - 150 secs
Peak Temperature (T_P)		260 ^{+0/-5} °C
Time within 5°C of actual peak Temperature (t_p)		20 - 40 secs
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (t)		8 minutes Max.
Do not exceed		260°C



BEPxxxxTA

Thyristor Surge Suppressor

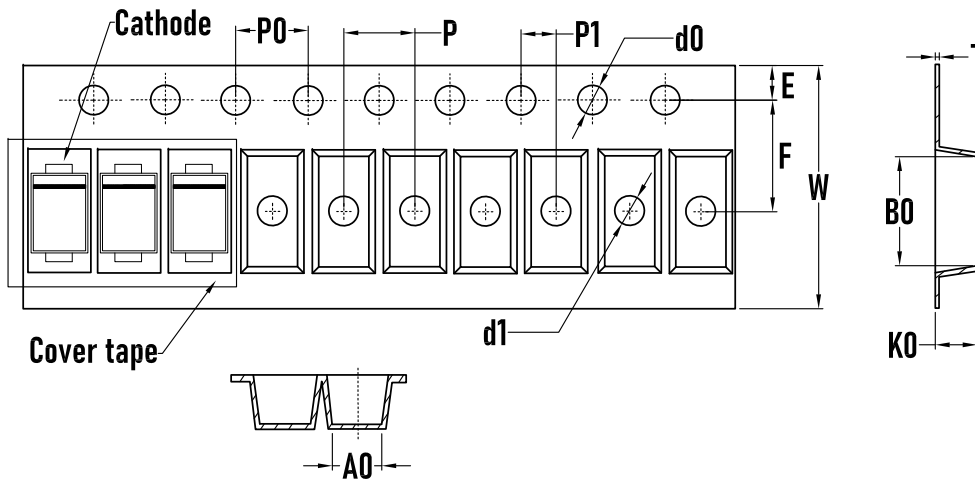
Outline Drawing - SMA



Note:
dimension : $\frac{\text{mm}}{\text{inch}}$

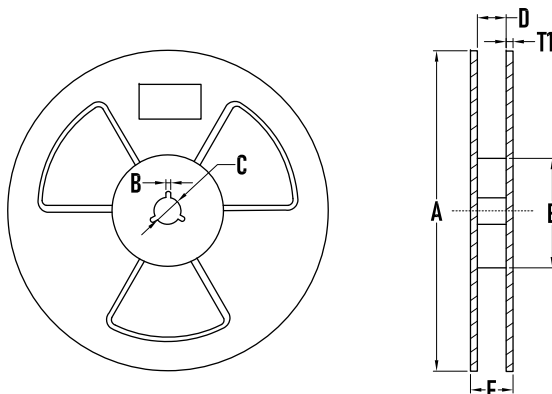
SYMBOL	Inches		MILLIMETER	
	MIN	MAX	MIN	MAX
D	0.098	0.106	2.5	2.7
D1	0.051	0.059	1.3	1.5
T	0.189	0.205	4.8	5.2
T1	0.035	0.060	0.9	1.5
d	-	0.008	-	0.2
H1	0.079	0.087	2.0	2.2
H	0.081	0.093	2.05	2.35
L	0.161	0.169	4.1	4.3

Packaging Tape - SMA



SYMBOL	MILLIMETER
A0	2.70
B0	5.10±0.1
d0	1.50±0.1
d1	1.50±0.1
E	1.75±0.1
F	5.50±0.1
K0	2.40±0.1
P	4.00±0.1
P0	4.00±0.1
P1	2.00±0.1
W	12.00±0.1
T	0.2±0.02

Packaging Reel



SYMBOL	MILLIMETER
A	323±2
B	3.0±0.2
C	15.0±0.5
D	13±2
E	73±2
T1	2.2±0.2
Quantity	5000PCS

**BORN SEMICONDUCTOR, INC. ALL
RIGHT RESERVED**

Specifications are subject to change without notice.
Please refer to <http://www.born-tw.com> for current information.

Revision: 2022-Jan-1



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Triacs](#) category:

Click to view products by [Bourne](#) manufacturer:

Other Similar products are found below :

[BT137-600-0Q](#) [2N6075A](#) [NTE5688](#) [D31410](#) [ACS102-5T1](#) [ACS102-5TA](#) [MAC97A4G](#) [Z0107MAG](#) [Z0107MARL1G](#) [Z0109MARLRPG](#)
[BTA316-800ET,127](#) [ACTT8X-800CTNQ](#) [MCR22-6G](#) [BTA16-800B\(MS\)](#) [TYN1025RG-JSM](#) [BT138-600D](#) [BT138-600E](#) [BTA24-600CWRG](#)
[BTA16-800CWRG](#) [BT138-600E](#) [BTA08-800CW](#) [BTB24-800CW](#) [BTA16-800CW](#) [BTA16-600CW](#) [BT169](#) [MCR100-6U](#) [FT10050-12P](#)
[BT136-800E](#) [BT136S](#) [PCR606J](#) [CT404D-800S](#) [JST24A-800CW](#) [JST60IS-1600BW](#) [TYN810RG-JSM](#) [BT139B-600E-JSM](#) [TYN812RG-JSM](#)
[BT152-800R](#) [BTB16-800BRG-JSM](#) [BTA20-800CRG TO-220](#) [BTA16-800BRG](#) [BTW69-1200RG](#) [TYN825RG-JSM](#) [BTA12-600CRG](#)
[BT136-600E](#) [BTA12-600BRG](#) [BT139-600E](#) [BTA24-800CRG TO-220](#) [BTA16-800BWRG](#) [BTA26-600BWRG](#) [BTA41-600BRG](#)