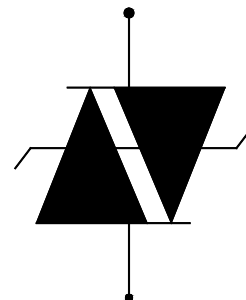


Features

- For surface mounted applications to optimize board space
- Low profile package
- Bidirectional crowbar protection
- Low leakage current : $I = 1\mu A$ max
- Low on-state voltage
- Low Capacitance
- Response Time is $< 1\mu s$
- YD/T 950 IEC 61000-4-5
- YD/T 993 ITU K.20/21
- YD/T 1082 TIA-968-A
- GR 1089 Intra-building
- Solid-state silicon technology
- Meets MSL 1 Requirements
- ROHS compliant



Schematic Diagram

Maximum Ratings and Electrical Characteristics

Symbol	Parameter		Value	Unit
I_{PP}	Non-repetitive peak pulse current	10/1000 μs	80	A
		2/10 μs	250	
		8/20 μs	250	
V_{PP}	Non-repetitive peak pulse voltage	10/700 μs	3000	V
V_{ESD}	ESD Rating per IEC61000-4-2:	Contact	8	KV
		Air	15	
T_s	Storage temperature range		-40 to +150	°C
T_j	Maximum junction temperature		150	°C

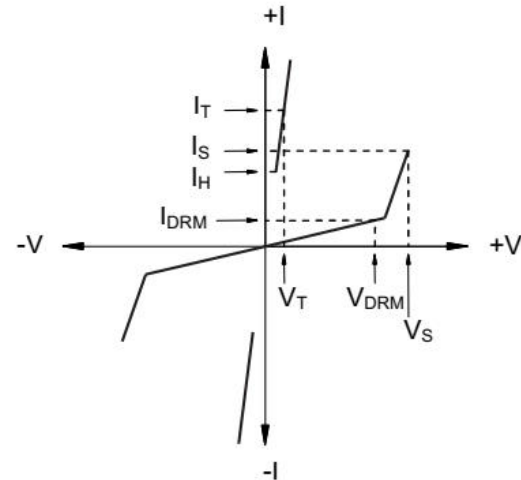
Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

*Other voltages may be available upon request.



Electrical Parameters

Symbol	Parameter
V_{DRM}	Stand-off voltage
V_S	Switching Voltage
I_S	Switching current
I_{DRM}	Leakage current at V_{DRM}
I_T	On-state current
I_H	Holding current
V_T	On-state Voltage at I_T
C_O	Off-state Capacitance



Electrical Characteristics ($T_A=25^\circ\text{C}$)

Part Number	$I_{DRM}@V_{DRM}$		$V_{BO}@I_{BO}$		$I_T@V_T$		I_H	C_O
	Max	Min	Max	Max	Typ	Max	Min	Typ.
P0080TCX	μA	V	V	mA	A	V	mA	pF
	1	5	25	800	2.2	4	50	100

V_{DRM} :Stand-off voltage is measured at I_{DRM} .

I_{DRM} :Leakage current at V_{DRM} .

V_{BO} :Breakover voltage is measured at $100\text{V}/\mu\text{s}$.

I_{BO} :Breakover current.

V_T :On-state voltage.

I_T :On-state current.

C_O :Off-state capacitance.

I_H :Holding current.

I_{PP} :Peak pulse current is a repetitive surge rating and is guaranteed for the life of the product.

V_{PPsm} :Peak pulse voltage is a repetitive surge rating and is guaranteed for the life of the product.



Typical electrical characterist applications

Rating and Characteristics Curves

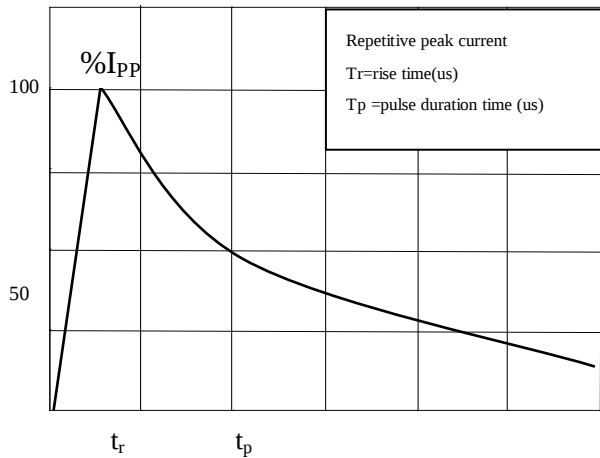


Fig.1 Pulse Waveform (5/310us)

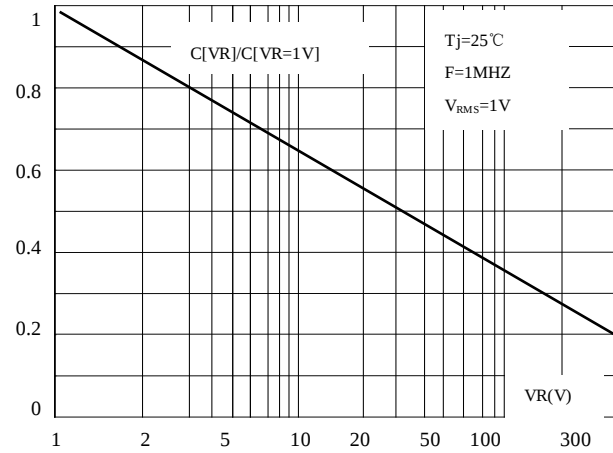


Fig. 2 Relation Variation Of Junction Capacitance Versus Reverse Voltage Applied (Typical Values)

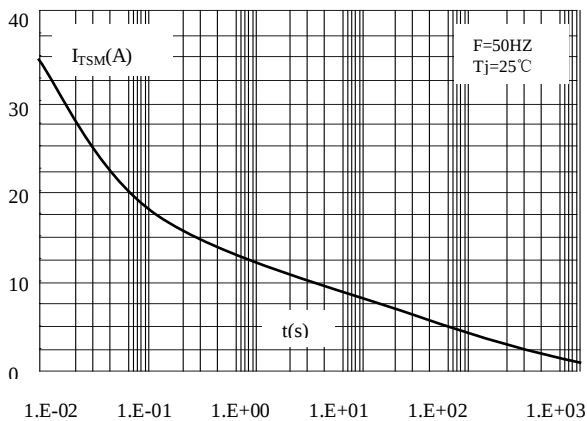


Fig.3 Non Repetitive Surge Peak On-State Current Versus Overload Duration

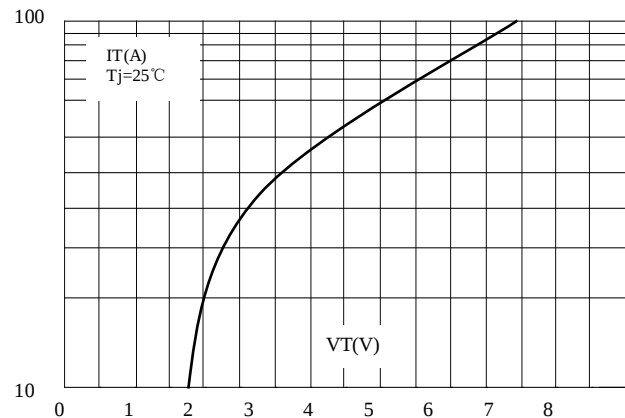


Fig.4 On-State Voltage Versus On-State Current (Typical Values)

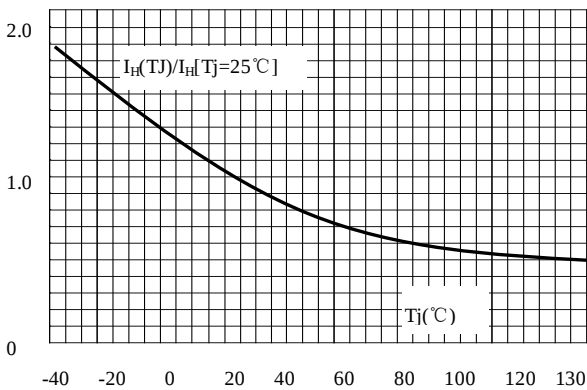


Fig.5 Relative Variation of Hold Current Versus Junction Temperature

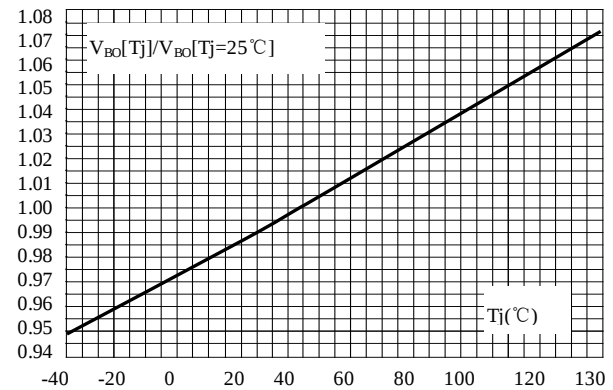


Fig.6 Relative Variation of Break Over Voltage Versus Junction Temperature



Typical electrical characterist applications

Rating and Characteristics Curves

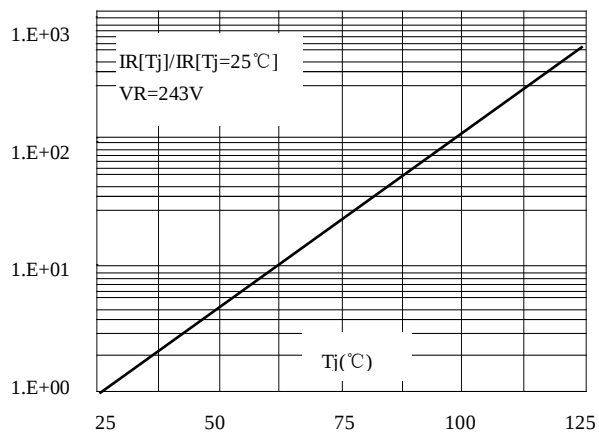


Fig.7 Relative Variation Of Leakage Current Versus Reverse Voltage (Typical Values)

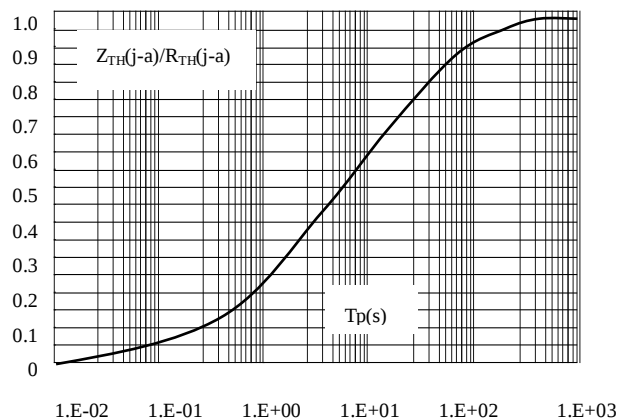


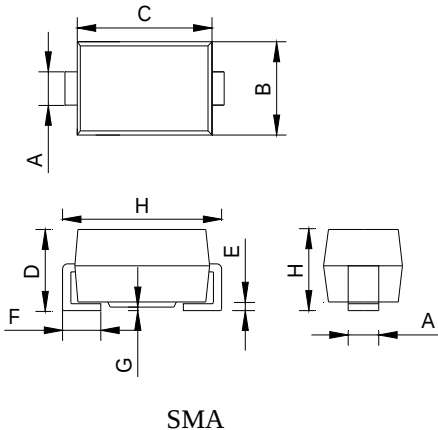
Fig.8 Variation Of Thermal Impedance Junction To Ambient Versus Pulse Duration



Package Information

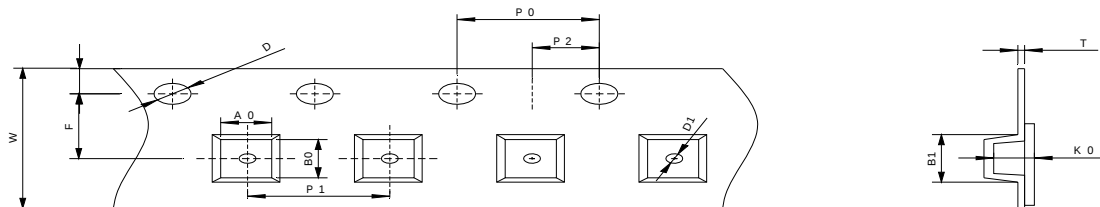
Mechanical Data

- Case: SMA
- Case Material: Molded Plastic. UL Flammability
- Classification Rating 94V-0
- Polarity Indicator: Cathode Band (Note: Bi-directional devices have no polarity indicator.)
- Weight: 0.064 grams (approximate)



DIM	Millimeters			Inches		
	Min	Nom	Max	Min	Nom	Max
A	1.25	1.45	1.65	0.049	0.057	0.065
B	2.40	2.67	2.79	0.095	0.105	0.110
C	3.39	3.95	4.60	0.133	0.156	0.181
D	1.98	2.14	2.29	0.0779	0.084	0.090
E	0.150	0.200	0.310	0.006	0.009	0.012
F	0.76	1.14	1.52	0.030	0.045	0.060
G	-	-	0.203	-	-	0.008
H	4.80	5.11	5.28	0.194	0.201	0.208

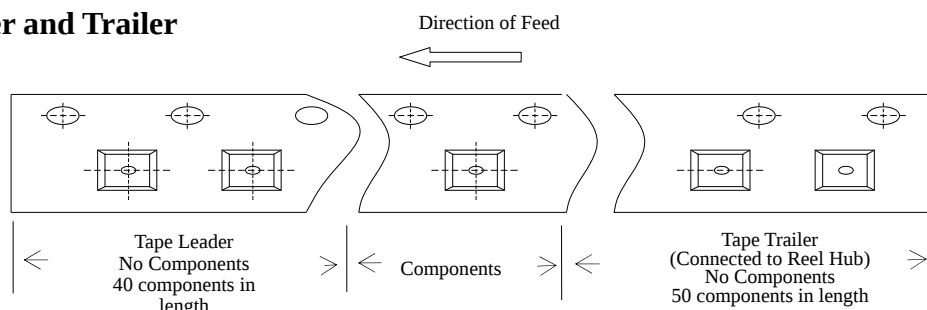
SMA Reel Dim



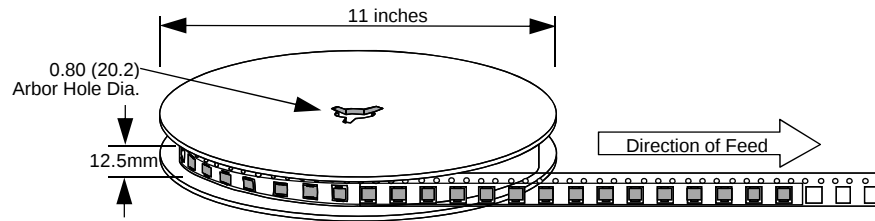
A0	B0	B1	D	D1	E	F	K0	T	W	P0	P1	P2
2.7	5.3	5.5	1.5	1.0	1.75	3.5	2.5	0.50	12	4.0	4.0	2.0

Dimension is in mm

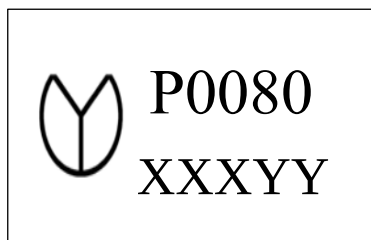
Leader and Trailer



The LEADER is a minimum of 40 components in length and it consists of empty cavities with sealed cover tape
The TRAILER is a minimum of 50 components in length and it consists of empty cavities with sealed cover tape.



Marking Codes



OR



Note:

- (1) "P0080" is part number, fixed.
- (2) "XXXYY" is the identification number.

Ordering Information

Part Number	Quantity Per Reel	Reel Size
P0080TCX	3,000	11 inch