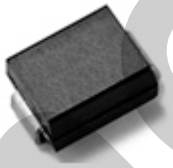
Description

Thyristor solid state protection thyristor protect telecommunications equipment such as modems, line cards, fax machines, and other CPE. This Series devices are used to enable equipment to meet various regulatory requirements including GR1089, ITUK.20, K.21 and K.45, IEC 60950, and TIA-968
(formerly known as FCC Part 68).

Applications

- Serial ports
- Data lines and security systems
- Network and telecom
- Audio / Video line
- 6KV @10/700uS SUR 700

DO-214AA(SMB) Package



Schematic Diagram



Part Number & Electrical Parameter

PART NUMBER	V_{DRM} V Min.	I_{DRM} uA Max.	V_S V Max.	I_S mA	V_T V Max.	I_T A	I_H mA	C_O pF Max.
P0640SC	58	5	77	800	4	2.2	≥120	80

1、Vs is measured at 100KV/S
2、Off-state capacitance is measured in V_{DC}=2V,V_{RMS}=1V,F=1MHz
3、All measurements are made at an ambient temperature of 25℃

SURGE RATINGS

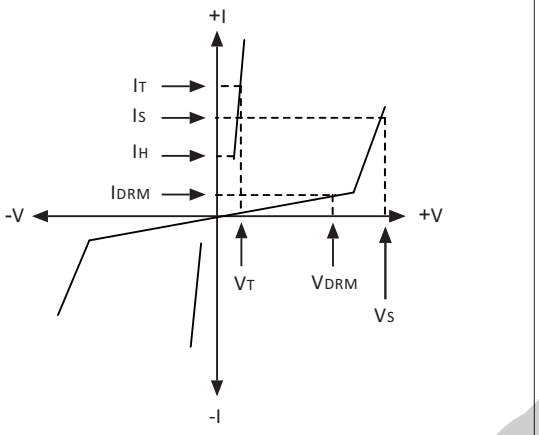
Series	IPP 2x10us (A)	IPP 8x20us (A)	IPP 10x360us (A)	IPP 10x5600us (A)	IPP 10x1000us (A)	I_{TSM} 60Hz (A)	di/dt (A/us)
P0640SC	300	260	130	100	80	32	500

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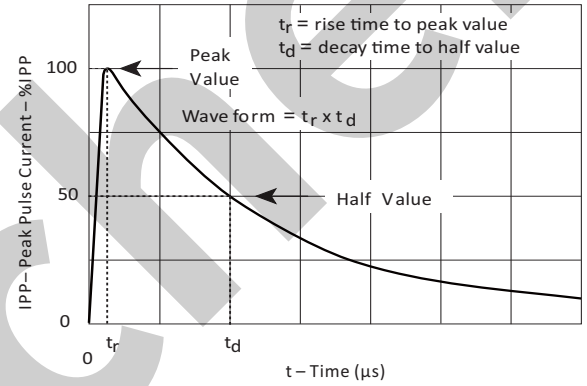
THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
T_J	Operating Junction Temperature	-40 to +150	℃
T_S	Storage Temperature Range	-40 to +150	℃
$R_{\theta JA}$	Junction to Ambient on printed circuit	90	℃/W

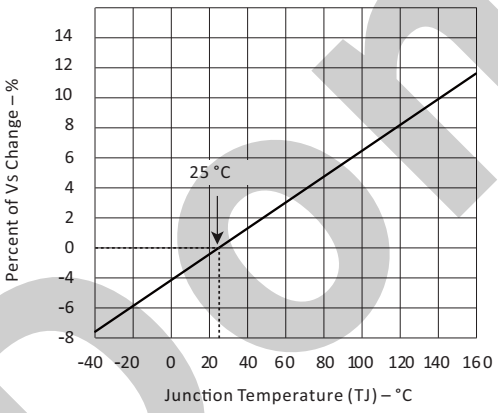
TYPICAL DEVICE CHARACTERISTICS



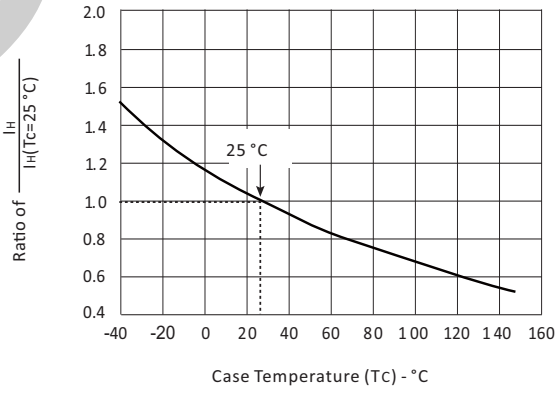
V-I Characteristics



tr x td Pulse Waveform



Normalized V_S Change vs. Junction Temperature



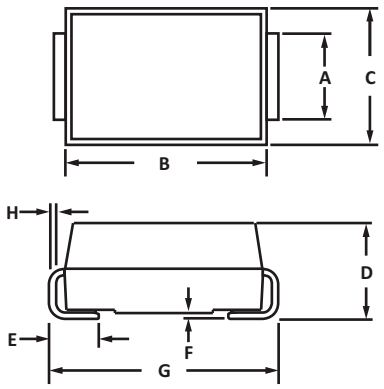
Normalized DC Holding Current vs. Case Temperature

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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℃ to 150℃ ;Dwell Time:30min,10-100 Cycles
High Temperature&High Humidity Test	Temperature:85℃.Humidity:85%; Time:168H
Pressure Cooker Test	Temperature:121℃,2 atm.Humidity:100%; Time:24H To 168H
Resistance Of Soldering Heat	Temperature:260±5℃;Time Of Dip Soldering:10s,3 Times

PRODUCT DIMENSIONS



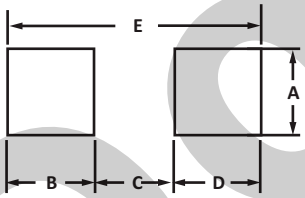
SMB PACKAGE DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.96	2.20	0.077	0.087
B	4.35	4.85	0.171	0.191
C	3.30	3.94	0130	0.155
D	2.20	2.50	0.087	0.098
E	0.76	1.52	0.030	0.060
F	0.02	0.20	0.001	0.008
G	5.08	5.59	0.200	0.220
H	0.15	0.30	0.006	0.012

NOTES:

1.Dimensions are exclusive of mold flash and metal burrs
2.Cathode Band is only applicable to the unidirectional package

RECOMMENDED PAD LAYOUT DIMENSIONS



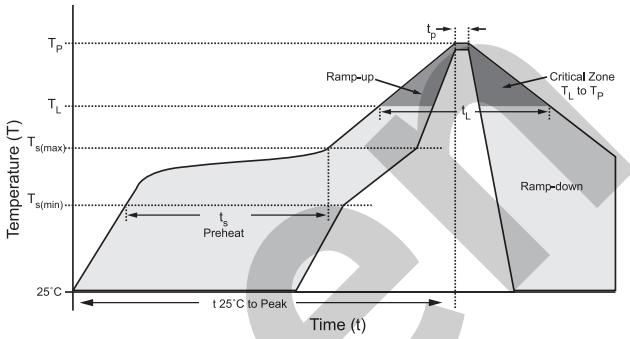
RECOMMENDED PAD LAYOUT DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.20	-	0.087	-
B	1.45	-	0.057	-
C	-	2.55	-	0.100
D	1.45	-	0.057	-
E	5.60 REF		0.220 REF	

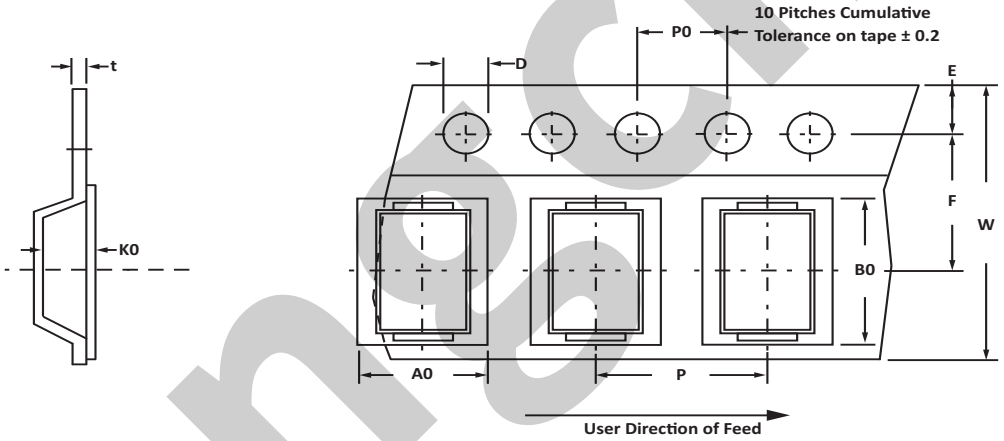
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SOLDERING PARAMETERS

Reflow Condition		Lead–free assembly
Pre Heat	Temperature Min (Ts(min))	150°C
	Temperature Max (Ts(max)	200°C
	Time (min to max) (ts)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak		3°C/second max
Ts(max)to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (ts)	60 – 150 seconds
Peak Temperature (T_P)		260°C
Time within 5°C of actual peak Temperature (tp)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_P)		8 minutes Max.
Do not exceed		260°C



TAPE AND REEL SPECIFICATION



SPECIFICATIONS

REEL DIA.	TAPE WIDTH	A0	B0	K0	D	E	F	W	P0	P	tmax
330mm (13")	12mm	3.79 ± 0.15	5.72 ± 0.15	2.46 ± 0.30	1.55 ± 0.05	1.75 ± 0.10	5.5 ± 0.05	12.00 ± 0.30	4.00 ± 0.10	8.00 ± 0.10	0.25 ± 0.10

NOTES
1. Dimensions are in millimeters.
2. Surface mount product is taped and reeled in accordance with EIA-481.
3. Suffix - T = 13" Reel - 3,000 pieces per 12mm tape.

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
P0640SC	DO-214AA	3000PCS	13"

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