



DESCRIPTION

DO-214AC/SMA 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).

FEATURES

- ◆ Excellent capability of absorbing transient surge
- ◆ Quick response to surge voltage
- ◆ Eliminates overvoltage caused by fast rising transients
- ◆ Solid-state silicon technology, non degenerative

APPLICATIONS

- ◆ Audio/Video line
- ◆ Network and telecom
- ◆ Data lines and security systems
- ◆ Serial ports

DO-214AC PACKAGE



SCHEMATIC SYMBOL



PART NUMBER AND ELECTRICAL PARAMETER @ T=25°C RH = 45%-75%

PART NUMBER	V _{DRM} V Min.	I _{DRM} µA Max.	V _S V Max.	I _S mA	V _T V Max.	I _r A	I _H mA	C ₀ pF Max.
P0080TB	6	5	15	800	4	2.2	≥50	90
P0300TB	25	5	40	800	4	2.2	≥50	90
P0640TB	58	5	77	800	4	2.2	≥150	65
P0720TB	65	5	88	800	4	2.2	≥150	65
P0900TB	75	5	98	800	4	2.2	≥150	60
P1100TB	90	5	130	800	4	2.2	≥150	60
P1500TB	140	5	180	800	4	2.2	≥150	65
P1800TB	170	5	220	800	4	2.2	≥150	65
P2300TB	190	5	260	800	4	2.2	≥150	60
P2600TB	220	5	300	800	4	2.2	≥150	55
P3100TB	275	5	350	800	4	2.2	≥150	50
P3500TB	320	5	400	800	4	2.2	≥150	45
P4200TB	400	5	520	800	4	2.2	≤50	45

1. V_S 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 °C

SURGE RATINGS

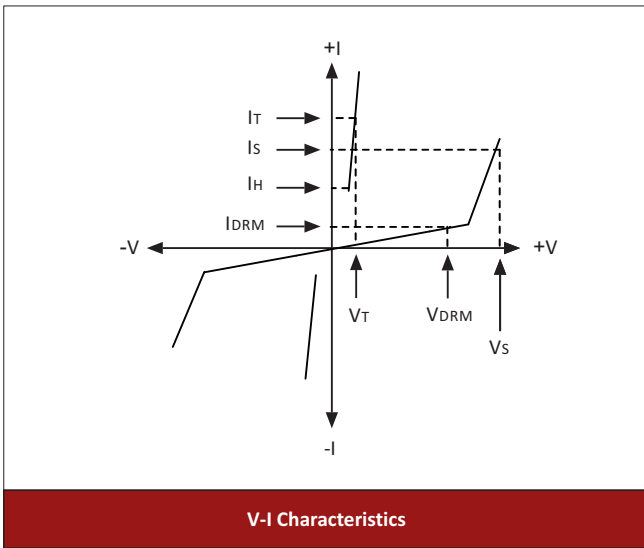
Series	IPP 2x10µs (A)	IPP 8x20µs (A)	IPP 10x560µs (A)	IPP 10x1000µs (A)	VPP 10x700µs (V)	I _{TSM} 60Hz (A)	d _i / d _t (A/µs)
P0080TB Thru P4200TB	250	250	100	80	4000	25	500



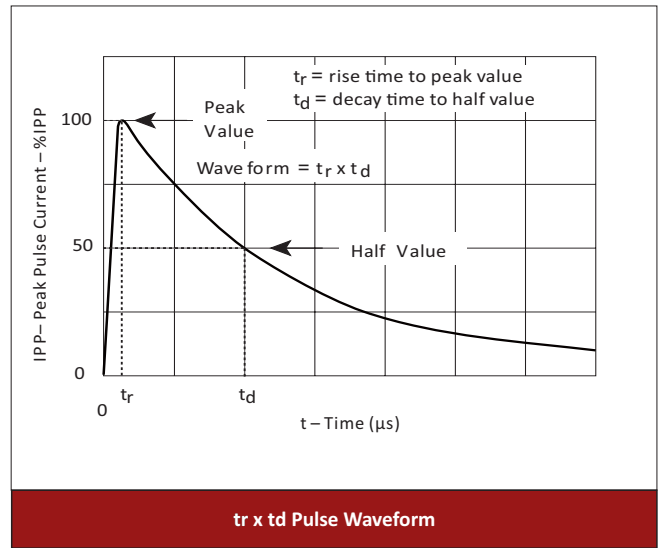
THERMAL CONSIDERATIONS

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

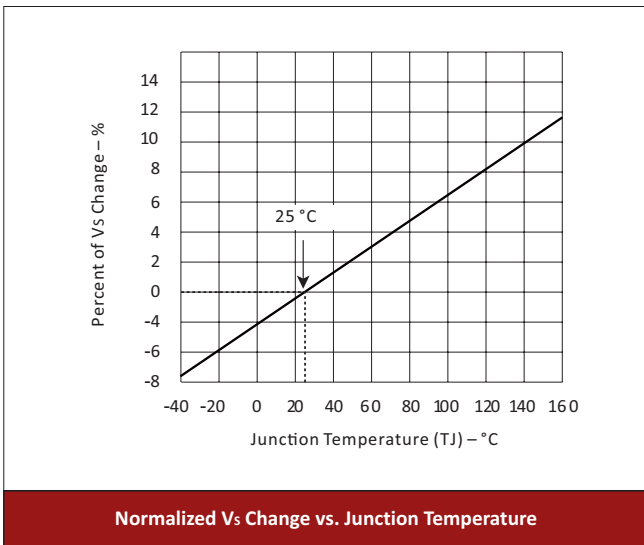
TYPICAL DEVICE CHARACTERISTICS



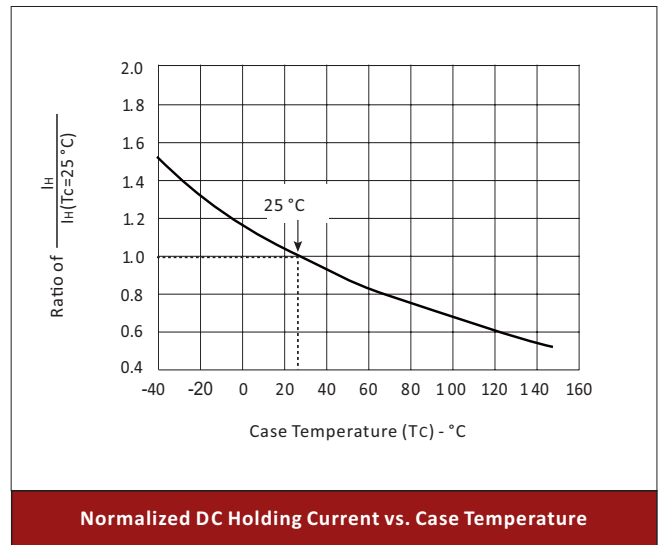
V-I Characteristics



$t_r \times t_d$ Pulse Waveform



Normalized V_S Change vs. Junction Temperature



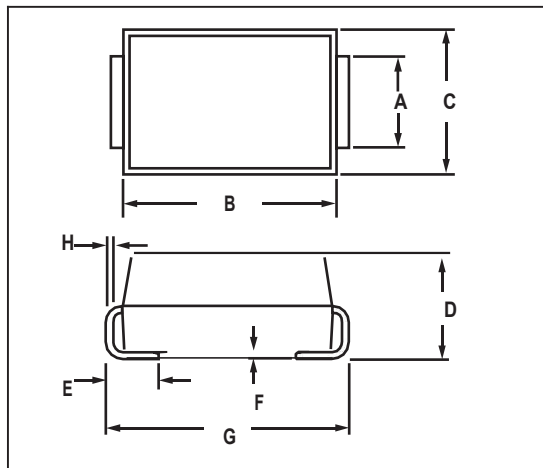
Normalized DC Holding Current vs. Case Temperature



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



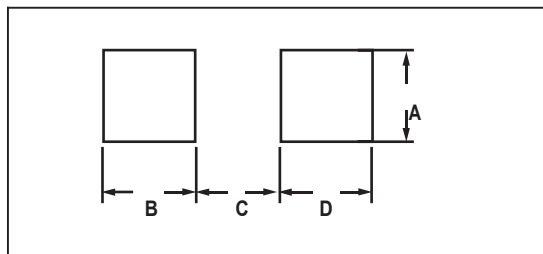
OUTLINE DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.23	1.63	0.049	0.064
B	4.10	4.55	0.162	0.179
C	2.51	2.76	0.099	0.109
D	1.96	2.26	0.077	0.089
E	0.75	1.51	0.030	0.060
F	0.00	0.20	0.000	0.008
G	4.87	5.22	0.192	0.206
H	0.15	0.30	0.006	0.012

NOTES

1. Dimensions are exclusive of mold flash and metal burrs.

RECOMMENDED PAD LAYOUT DIMENSIONS



PAD LAYOUT DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.57	-	0.062	-
B	1.55	-	0.061	-
C	-	2.28	-	0.090
D	1.55	-	0.061	-