



Features

- ◆ Bi-directional crowbar transient voltage protection
- ◆ High surge capability
- ◆ High off-state impedance
- ◆ Low leakage current
- ◆ Low on-state voltage
- ◆ Short-circuit failure mode



DO-214AA(SMB)

Typical application including:

- Central office switching equipment. Analog and digital linecards(xDSL,T1/E1,ISDN.....)
- Customer Premises Equipment (CPE) such as phones, fax machines, modems, POS terminals, PBX systems and caller ID adjunct boxes.
- Primary protection modules including Main Distribution Frames (MDF), building entrance equipment and station protection modules.
- Access network equipment such as remote terminals, line repeaters, multiplexers, cross-connects, WAN equipment, Network Interface Devices (NID).
- Data lines and security systems.
- CATV line amplifiers and power inserters.
- Sprinkler systems.

Electrical Parameters (Tamb=25°C)

Part Number	V _{DRM}	I _{DRM}	V _{BO}	I _{BO}	V _T	I _T	C _o	I _H
	Min.	Max.	Max.	Max.	Max.	Max.	Typ.	Min.
	V	uA	V	mA	V	A	pF	mA
SP2300SC	270	5	310	800	4	2.2	60	120

Electrical Characteristics

V _{DRM}	Stand-off voltage, is measured at I _{DRM}	I _H	Holding current.
V _{BO}	Breakover voltage, is measured at 100V/μs.	I _{BO}	Breakover current.
C _o	Off-state capacitance is measured in V _{DC} =2V@1MHz.	I _T	ON-state current
I _{DRM}	Leakage current, is measured at V _{DRM} .	V _T	On-state voltage.





Electrical Characteristics Curves

Figure1 V-I Characteristics

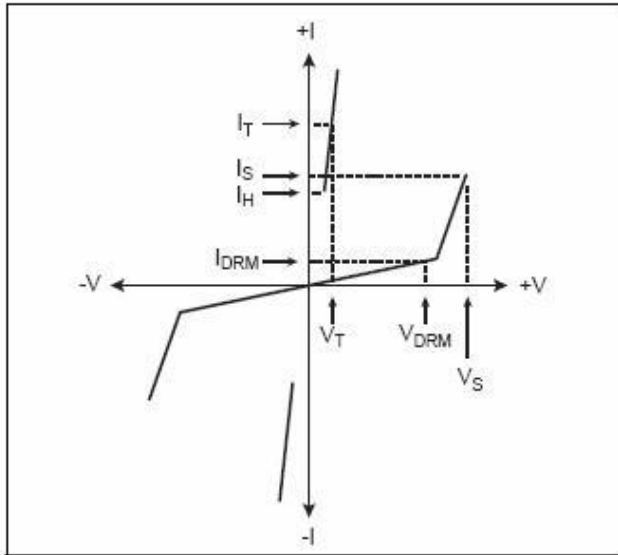


Figure2 tr x td Pulse Wave-form

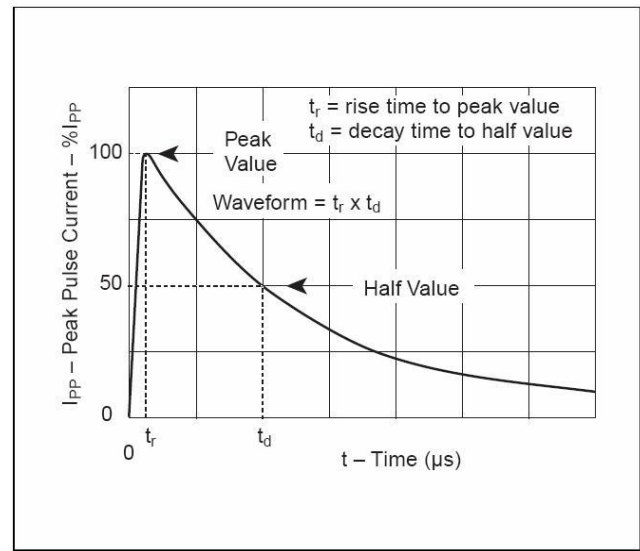


Figure 3 Normalized V_S Change versus Junction Temperature

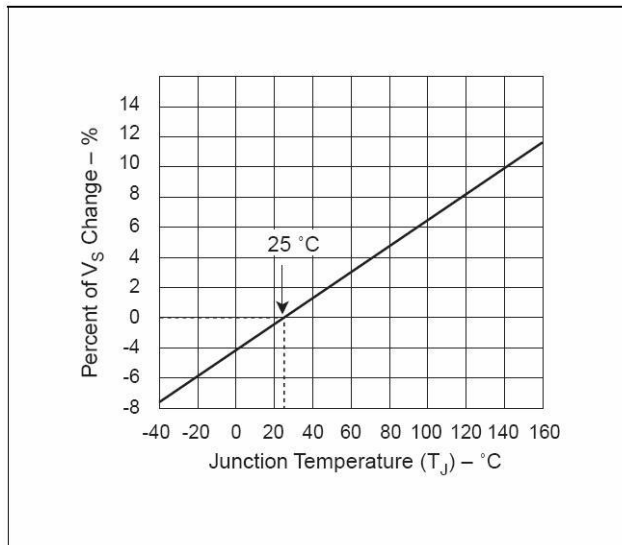
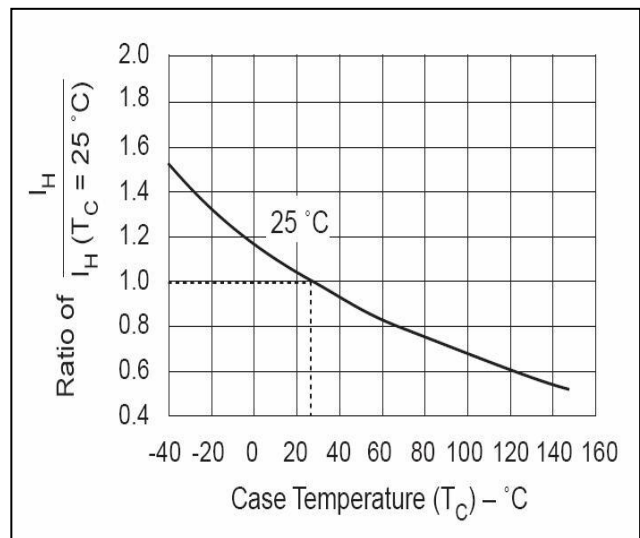



Figure 4 Normalized DC Holding Current



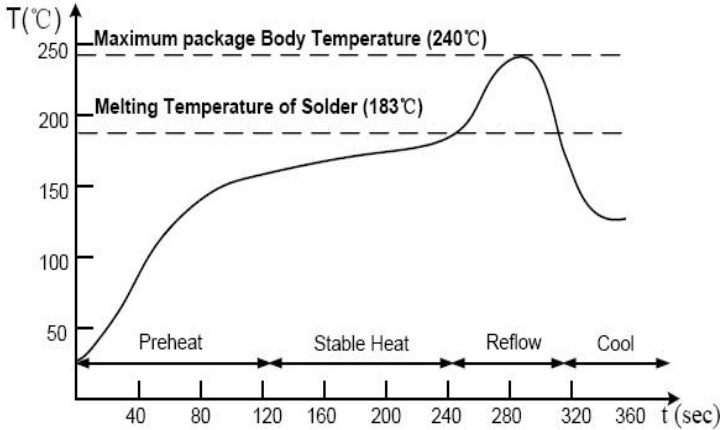
Thermal Considerations

Package	DO-214AC/SMA	Symbol	Parameter	Value	Unit
		T_J	Operating Junction Temperature	-40 to +150	°C
		T_S	Storage Temperature Range	-40 to +150	°C
		$R_{\theta JA}$	Junction to Ambient on printed circuit	90	°C/W





Solder Reflow Recommendations

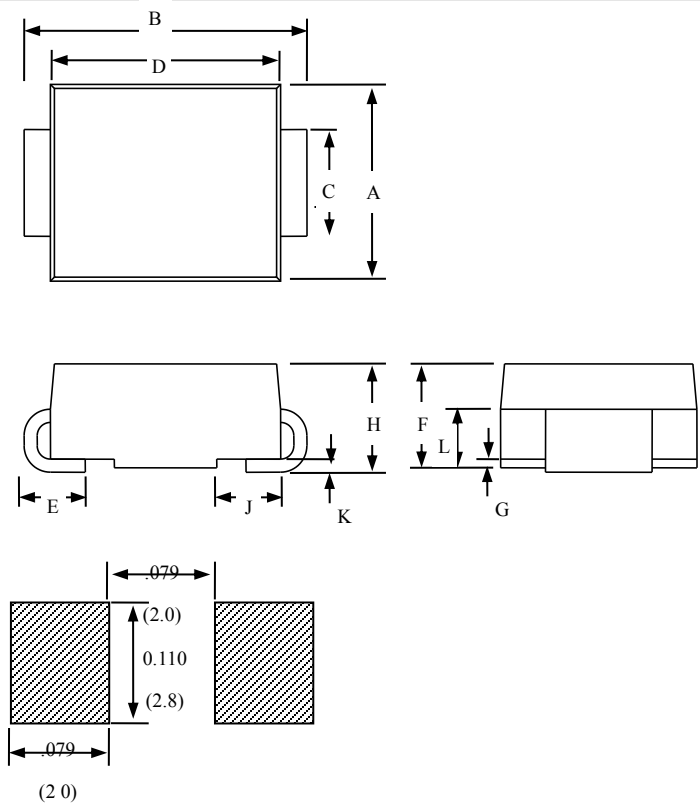


- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.

Notes: If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Product Dimensions

Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.134	0.155	3.40	3.94
B	0.205	0.22	5.21	5.59
C	0.075	0.083	1.90	2.11
D	0.166	0.185	4.22	4.70
E	0.036	0.056	0.91	1.42
F	0.073	0.087	1.85	2.2
G	0.002	0.008	0.05	0.20
H	0.077	0.094	1.95	2.40
J	0.043	0.053	1.09	1.35
K	0.008	0.014	0.20	0.35
L	0.039	0.049	0.99	1.24



Part Numbering System

SP XXX S C
(A) (B) (C) (D)

- (A) Semiconductor Surge Arrester.
- (B) Series:0060,0300,0640.....3500,3800,4200etc.
- (C) T:Package:DO-214AA(SMB)
- (D) Rating Sure Voltage:C: $\geq 6KV(10/700\mu s)$