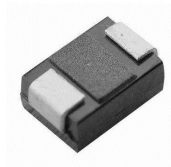


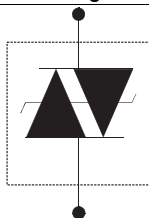
SOLID STATE TELECOMMUNICATION PROTECTION ARRESTOR

Breakdown Voltage - 62 to 270 Volts Holding Current - 150 Milliampere



SMB
(JEDEC DO-214AA)

Figure 1. Device configuration



FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Bidirectional crowbar protection
- ◆ Fast response
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed 250°C/10 seconds on terminals

MECHANICAL DATA

Case: JEDEC DO-214AA molded plastic body

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.003 ounce, 0.093 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

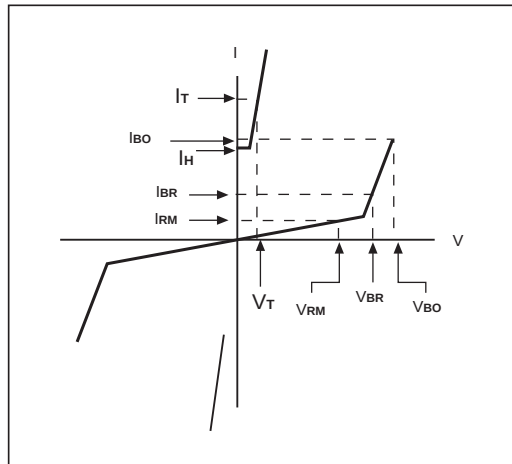
	SYMBOLS	STPA 62	STPA 68	STPA 100	STPA 120	STPA 130	STPA 180	STPA 200	STPA 220	STPA 240	STPA 270	UNITS
Maximum breakdown voltage ($I_R=1mA$)	V_{BR}	62	68	100	120	130	180	200	220	240	270	VOLTS
Maximum breakover voltage ($I_{BO}=800mA$)	V_{BO}	82	90	133	160	173	240	267	293	320	360	VOLTS
Maximum off-state voltage	V_{RM}	56	61	90	108	117	162	180	198	216	243	VOLTS
Maximum on-state voltage ($I_T=1A$)	V_T	2	4									VOLTS
Maximum off-state current @ V_{RM}	I_{RM}	2										μA
Maximum holding current	I_H	150										mA
Maximum peak pulse current (10/1000 μs)	I_{PP}	50										A
Maximum surge current (50 Hz)	I_{TSM}	25										A
Minimum critical off-state voltage rise rate	dV/dt	2										KV/ μs
Typical junction capacitance (Note 1)	C_J	150	100									pF
Junction temperature	T_J	-40 to +150										°C
Storage temperature	T_{STG}	-40 to +150										°C
Junction to leads on infinite heatsink	$R_{\theta JL}$	60										°C/W
Junction to ambient on printed circuit L(lead)=10mmA	$R_{\theta JA}$	100										°C/W

Note 1: F=1MHz $V_R=1V$

RATINGS AND CHARACTERISTIC CURVES STPA62 THRU STPA270

NOTE1:MEANING OF PARAMETERS

Symbol	Parameter
V_{RM}	Stand-off voltage
V_{BR}	Breakdown voltage
V_{BO}	Breakover voltage
I_H	Holding current
V_T	On-state voltage
I_{BO}	Breakover current
I_{PP}	Peak pulse current



NOTE2:ALL STPA SERIES MEET THE SURGE REQUIREMENTS OF THE FOLLOWING STANDARDS:

CCITTK 17-K20	10/700 μ s	1.5KV
	5/310 μ s	38A
VDE0433	10/700 μ s	2KV
	5/200 μ s	50A
CNET	0.5/700 μ s	1.5KV
	0.2/310 μ s	38A

RATINGS AND CHARACTERISTIC CURVES STPA62 THRU STPA270

FIG.1-PULSE WAVE FORM(10/1000 μ s)

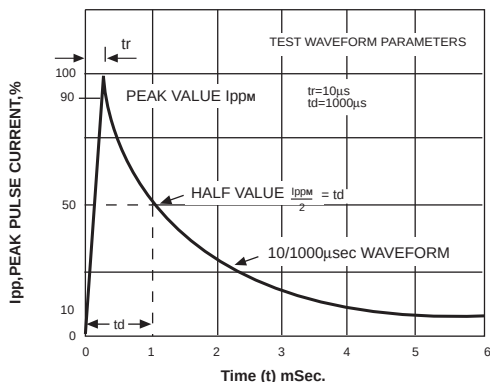


FIG. 2-NORMALIZED DC HOLDING CURRENT VS CASE TEMPERATURE

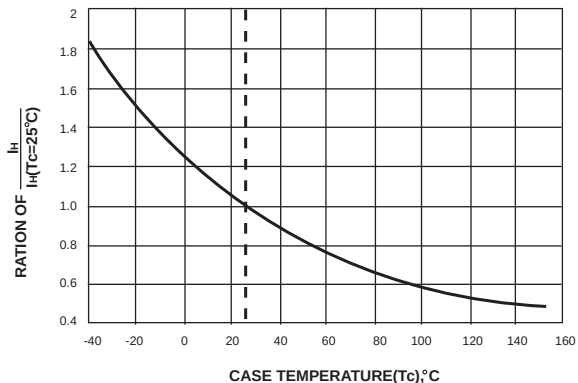


FIG. 3-TYPICAL TRANSIENT THERMAL IMPEDANCE

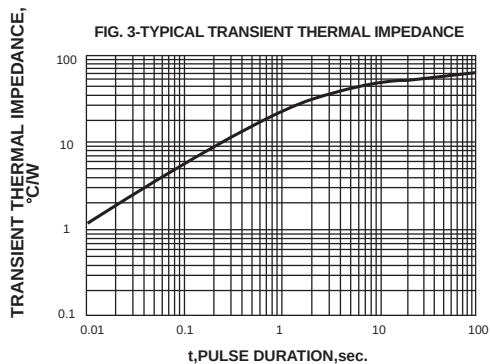


FIG. 4-NORMALIZED V_{BO} CHANGE VS JUNCTION TEMPERATURE

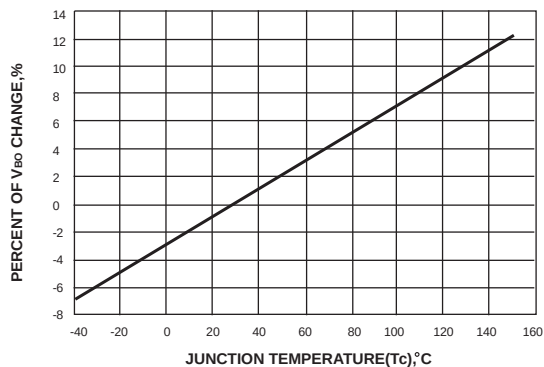


FIG. 5-NON REPETITIVE SURGE PEAK ON-STATE CURRENT VERSUS OVERLOAD DURATION (T_J INITIAL= $25^\circ C$)

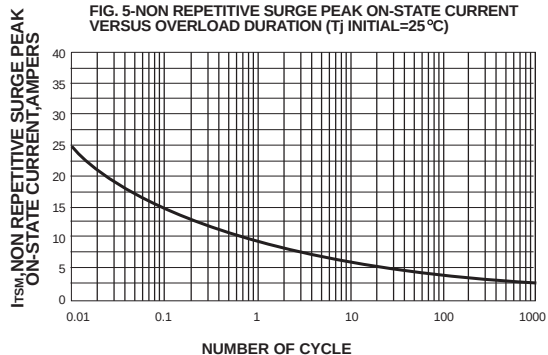
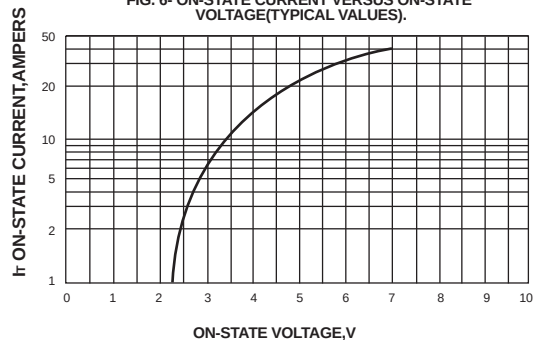
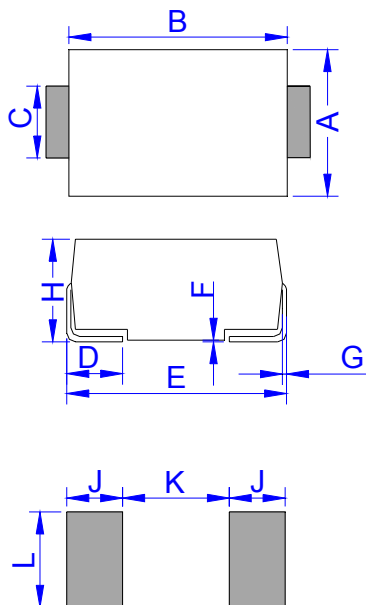


FIG. 6- ON-STATE CURRENT VERSUS ON-STATE VOLTAGE(TYPICAL VALUES).



RATINGS AND CHARACTERISTIC CURVES STPA62 THRU STPA270

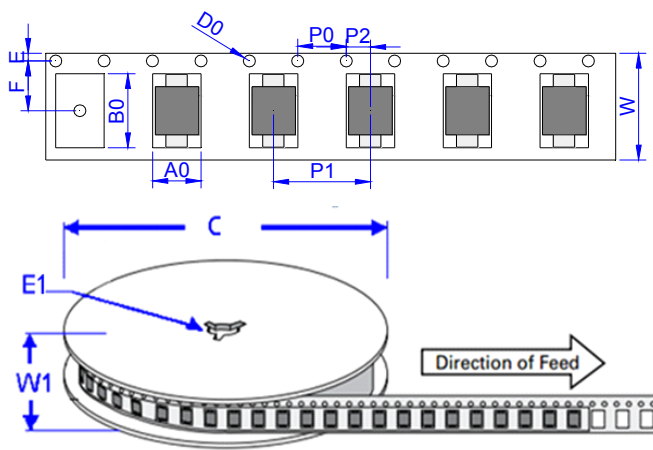
PACKAGE MECHANICAL DATA



DO-214AA (SMB)

Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.30	3.94	0.130	0.155
B	4.30	4.80	0.169	0.189
C	1.90	2.20	0.075	0.087
D	0.95	1.52	0.037	0.060
E	5.20	5.60	0.205	0.220
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.10	2.40	0.083	0.094
J	2.20		0.087	
K		2.60		0.102
L	2.30		0.091	

TAPE AND REEL SPECIFICATION-SMB



Ref.	Dimensions	
	Millimeters	Inches
A0	3.76 ± 0.3	0.148 ± 0.012
B0	5.69 ± 0.3	0.224 ± 0.012
C	330.0	13.0
D0	1.55 ± 0.1	0.061 ± 0.004
E	1.75 ± 0.2	0.069 ± 0.008
E1	13.3 ± 0.3	0.524 ± 0.012
F	5.5 ± 0.2	0.217 ± 0.008
P0	4.00 ± 0.2	0.157 ± 0.008
P1	8.00 ± 0.2	0.3145 ± 0.008
P2	2.00 ± 0.2	0.079 ± 0.008
W	12.0 ± 0.2	0.472 ± 0.008
W1	15.7 ± 2.0	0.618 ± 0.079

PART No.	UNIT WEIGHT (g/PCS) typ.	REEL (PCS)	PER CARTON (PCS)	DESCRIPTION
STPAxxxx	0.098	3,000	48,000	13 inch reel pack