佳邦科技股份有限公司
INPAQ TECHNOLOGY CO., LTD.

SMDJ-T Series

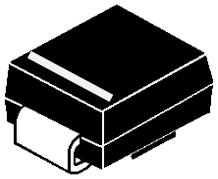
Specification

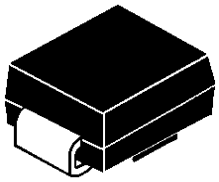
Product Name	Power TVS (Transient Voltage Suppressor)
Series	SMDJ-T Series
Package Size	SMD(DO214-AB)

SMDJ-T Series Engineering Specification

1. FEATURES

- 3000W Surface Mount Transient Voltage Suppressors
- Glass passivated chip junction
- For surface mounted applications
- Reliable low cost construction utilizing molded plastic technique
- Plastic material has UL flammability classification 94V-O
- Typical IR less than 1uA above 10V
- Fast response time
- RoHS compliant


Uni-directional


Bi-directional

2.MECHANICAL CHARACTERISTICS

- Case : Molded plastic
- Case Material: Molding compound, UL Flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen free".
- Polarity : by cathode band denotes uni-directional device none cathode band denotes bi-directional device

3. Specifications

3.1Maximum Ratings and Characteristics @ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Value	Units
Peak Power Dissipation (Note 1.) @T_L = 25°C, Pulse Width = 1 ms	P_{PK}	3000	W
Forward Surge Current (Note 2.) @T_A = 25°C	I_{FSM}	200	A
Power Dissipation On Infinite Heatsink, @T_A = 50°C	$P_{M(AV)}$	5.0	W
Thermal Resistance Junction To Ambient Air (Note 3.)	$R_{\theta JA}$	75	°C/W
Thermal Resistance Junction To Leads	$R_{\theta JL}$	15	°C/W
Storage Temperature Range	T_{STG}	-55 to 150	°C
Operating Junction Temperature Range	T_J	-55 to 150	°C

(1) 10 X 1000 us, non–repetitive

(2) 1/2 sine wave (or equivalent square wave), PW = 8.3ms, duty cycle = 4 pulses per minute maximum

(3) Mounted on minimum recommended pad layout

3.2Electrical Specification @ Tamb 25°C

Part Number		Device Marking Code		Reverse Stand off Voltage VR	Breakdown Voltage VBR (Volts) @ IT		Test Current IT	Maximum Clamping Voltage VC @ IPP	Maximum Peak Pulse Current IPP	Maximum Reverse Leakage IR @ VR
UNI	BI	UNI	BI	(Volts)	MIN	MAX	(mA)	(Volts)	(A)	(μA)
SMDJ5.0A-T	SMDJ5.0CA-T	HDE	IDE	5	6.4	7.07	10	9.2	326.1	500
SMDJ6.0A-T	SMDJ6.0CA-T	HDG	IDG	6	6.67	7.37	10	10.3	291.3	500
SMDJ6.5A-T	SMDJ6.5CA-T	HDK	IDK	6.5	7.22	7.98	10	11.2	267.9	300
SMDJ7.0A-T	SMDJ7.0CA-T	HDM	IDM	7	7.78	8.6	10	12	250	200
SMDJ7.5A-T	SMDJ7.5CA-T	HDP	IDP	7.5	8.33	9.21	1	12.9	232.6	100
SMDJ8.0A-T	SMDJ8.0CA-T	HDR	IDR	8	8.89	9.83	1	13.6	220.6	50
SMDJ8.5A-T	SMDJ8.5CA-T	HDT	IDT	8.5	9.44	10.4	1	14.4	208.3	30
SMDJ9.0A-T	SMDJ9.0CA-T	HDV	IDV	9	10	11.1	1	15.4	194.8	30
SMDJ10A-T	SMDJ10CA-T	HDX	IDX	10	11.1	12.3	1	17	176.5	5
SMDJ11A-T	SMDJ11CA-T	HDZ	IDZ	11	12.2	13.5	1	18.2	164.8	1
SMDJ12A-T	SMDJ12CA-T	HEE	IEE	12	13.3	14.7	1	19.9	150.8	1
SMDJ13A-T	SMDJ13CA-T	HEG	IEG	13	14.4	15.9	1	21.5	139.5	1
SMDJ14A-T	SMDJ14CA-T	HEK	IEK	14	15.6	17.2	1	23.2	129.3	1
SMDJ15A-T	SMDJ15CA-T	HEM	IEM	15	16.7	18.5	1	24.4	123	1
SMDJ16A-T	SMDJ16CA-T	HEP	IEP	16	17.8	19.7	1	26	115.4	1
SMDJ17A-T	SMDJ17CA-T	HER	IER	17	18.9	20.9	1	27.6	108.7	1
SMDJ18A-T	SMDJ18CA-T	HET	IET	18	20	22.1	1	29.2	102.7	1
SMDJ20A-T	SMDJ20CA-T	HEV	IEV	20	22.2	24.5	1	32.4	92.6	1
SMDJ22A-T	SMDJ22CA-T	HEX	IEX	22	24.4	26.9	1	35.5	84.5	1
SMDJ24A-T	SMDJ24CA-T	HEZ	IEZ	24	26.7	29.5	1	38.9	77.1	1
SMDJ26A-T	SMDJ26CA-T	HFE	IFE	26	28.9	31.9	1	42.1	71.3	1
SMDJ28A-T	SMDJ28CA-T	HFG	IFG	28	31.1	34.4	1	45.4	66.1	1
SMDJ30A-T	SMDJ30CA-T	HFK	IFK	30	33.3	36.8	1	48.4	62	1
SMDJ33A-T	SMDJ33CA-T	HFM	IFM	33	36.7	40.6	1	53.3	56.3	1
SMDJ36A-T	SMDJ36CA-T	HFP	IFP	36	40	44.2	1	58.1	51.6	1
SMDJ40A-T	SMDJ40CA-T	HFR	IFR	40	44.4	49.1	1	64.5	46.5	1
SMDJ43A-T	SMDJ43CA-T	HFT	IFT	43	47.8	52.8	1	69.4	43.2	1
SMDJ45A-T	SMDJ45CA-T	HFV	IFV	45	50	55.3	1	72.7	41.3	1
SMDJ48A-T	SMDJ48CA-T	HFX	IFX	48	53.3	58.9	1	77.4	38.8	1
SMDJ51A-T	SMDJ51CA-T	HFZ	IFZ	51	56.7	62.7	1	82.4	36.4	1

SMDJ54A-T	SMDJ54CA-T	HGE	IGE	54	60	66.3	1	87.1	34.4	1
Part Number		**Device Marking Code**		**Reverse Stand off Voltage VR**	**Breakdown Voltage VBR (Volts) @ IT**		**Test Current IT**	**Maximum Clamping Voltage VC @ IPP**	**Maximum Peak Pulse Current IPP**	**Maximum Reverse Leakage IR @ VR**
UNI	**BI**	**UNI**	**BI**	**(Volts)**	**MIN**	**MAX**	**(mA)**	**(Volts)**	**(A)**	**(μA)**
SMDJ58A-T	SMDJ58CA-T	HGG	IGG	58	64.4	71.2	1	93.6	32.1	1
SMDJ60A-T	SMDJ60CA-T	HGK	IGK	60	66.7	73.7	1	96.8	31	1
SMDJ64A-T	SMDJ64CA-T	HGM	IGM	64	71.1	78.6	1	103	29.1	1
SMDJ70A	SMDJ70CA	HGP	IGP	70	77.8	86	1	113	26.5	1
SMDJ75A	SMDJ75CA	HGR	IGR	75	83.3	92.1	1	121	24.8	1
SMDJ78A	SMDJ78CA	HGT	IGT	78	86.7	95.8	1	126	23.8	1
SMDJ85A	SMDJ85CA	HGV	IGV	85	94.4	104	1	137	21.9	1
SMDJ90A	SMDJ90CA	HGX	IGX	90	100	111	1	146	20.5	1
SMDJ100A	SMDJ100CA	HGZ	IGZ	100	111	123	1	162	18.5	1
SMDJ110A	SMDJ110CA	HHE	IHE	110	122	135	1	177	16.9	1
SMDJ120A	SMDJ120CA	HHG	IHG	120	133	147	1	193	15.5	1
SMDJ130A	SMDJ130CA	HHK	IHK	130	144	159	1	209	14.4	1
SMDJ150A	SMDJ150CA	HHM	IHM	150	167	185	1	243	12.3	1
SMDJ160A	SMDJ160CA	HHP	IHP	160	178	197	1	259	11.6	1
SMDJ170A	SMDJ170CA	HHR	IHR	170	189	209	1	275	10.9	1

※For Bi-directional type having VRWM of 10 Volts and less, the IR limit is double

1. A transient suppressor is normally selected according to the working peak reverse voltage (VRWM), which should be equal to or greater than the DC or continuous peak operating voltage level.
2. VBR measured at pulse test current IT at an ambient temperature of 25°C.
3. Surge current waveform per Figure 1 and derate per Figure 3.

4. Typical Characteristics

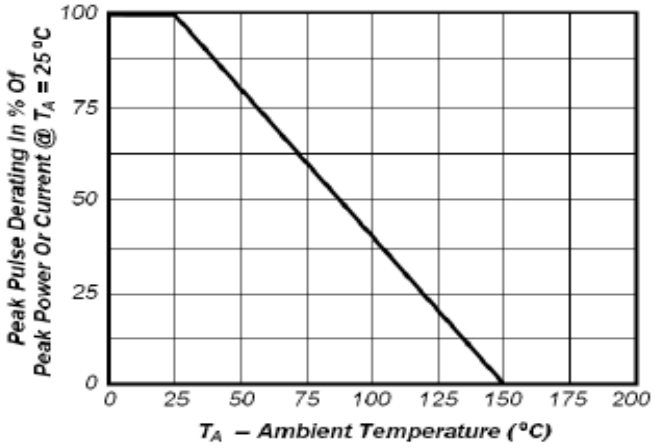


Fig1. Pulse Dearting Curve

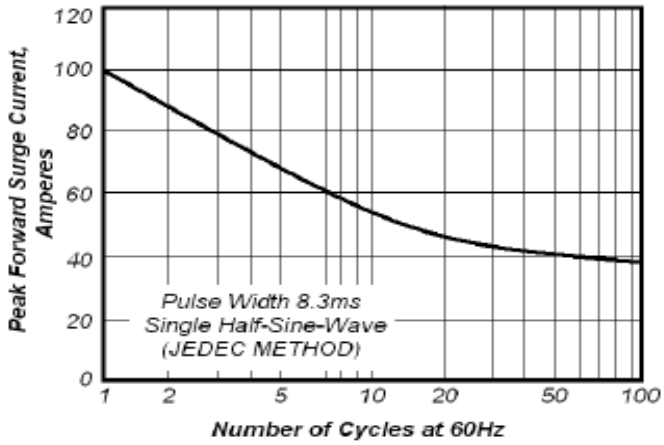


Fig2. Maximum Non-Repetitive Peak Forward Surge Current

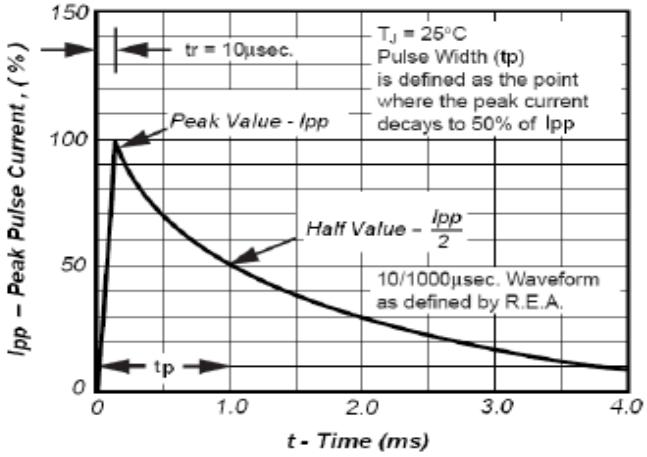


Fig3. Pulse Waveform

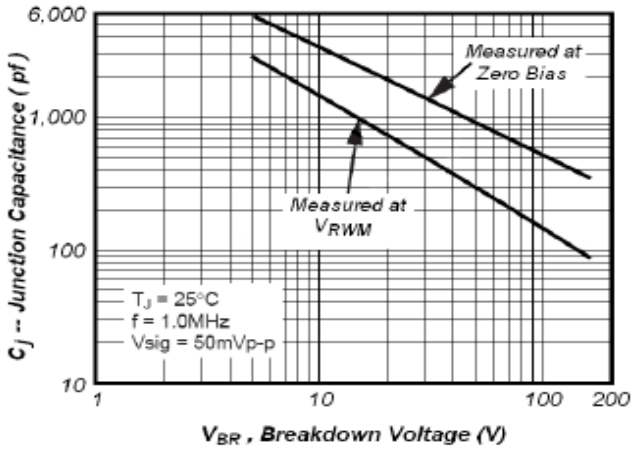


Fig4. Typical Junction Capacitance

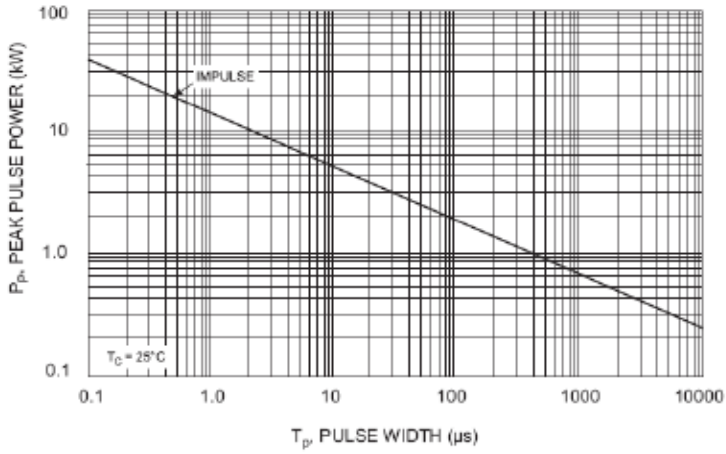


Fig5. Peak Pulse Power Rating curve

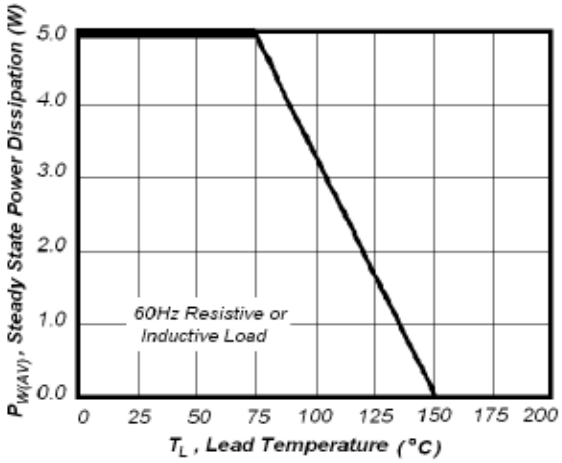
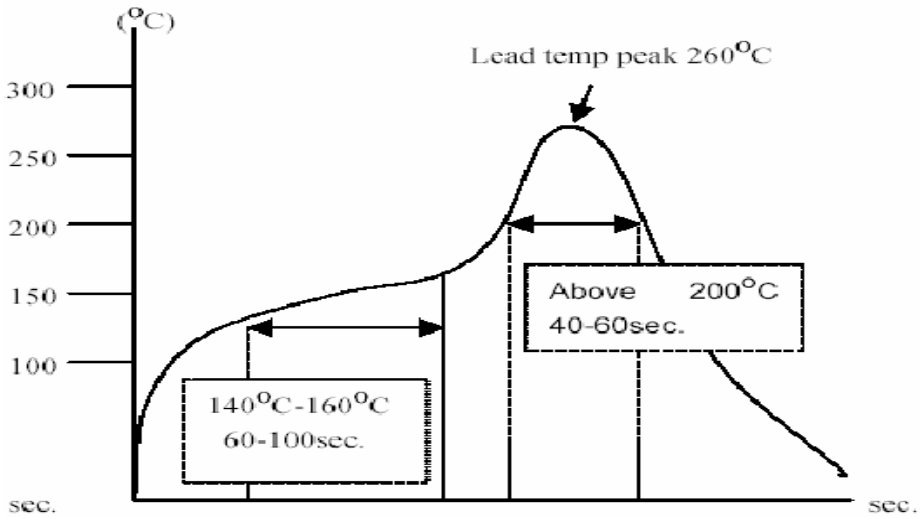
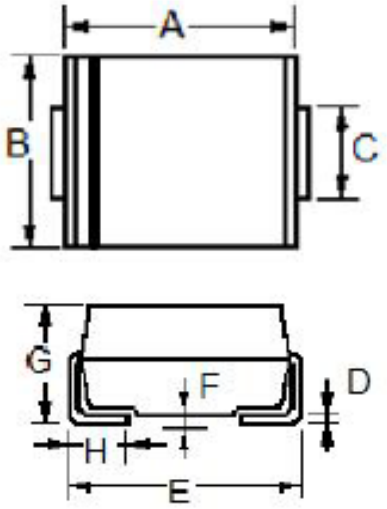


Fig6. Steady State Power Derating Curv

5. Reflow soldering

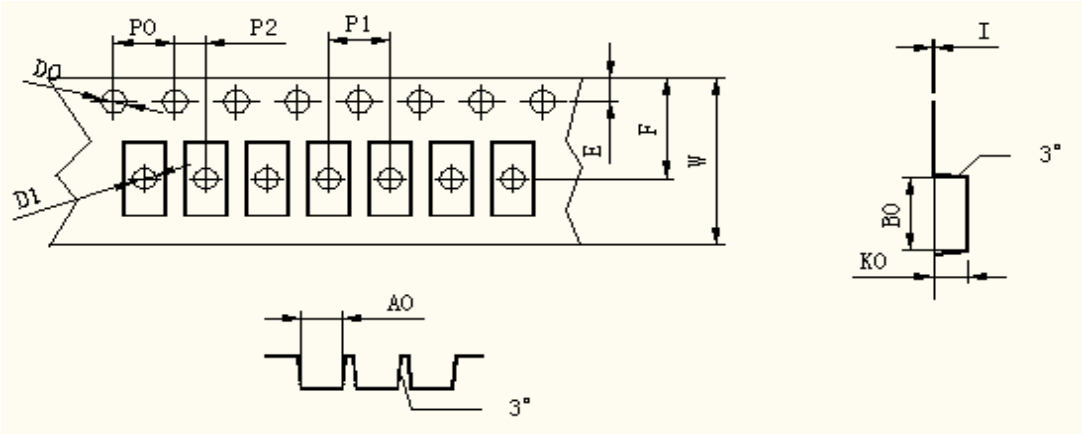


6. Dimension



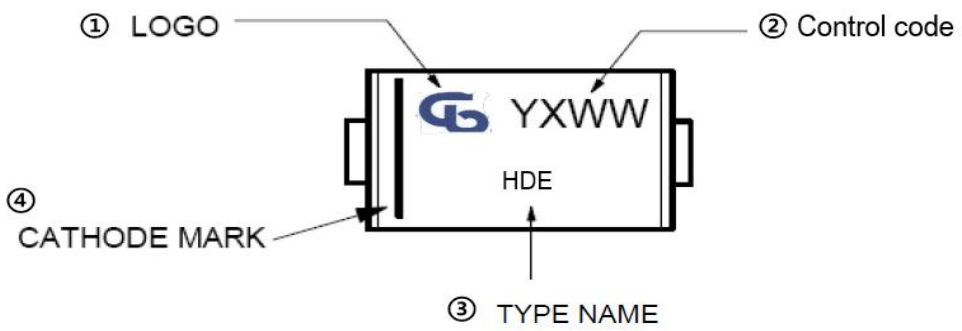
Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	6.600	7.110	0.260	0.280
B	5.590	6.220	0.220	0.245
C	2.900	3.200	0.114	0.126
D	0.125	0.305	0.006	0.012
E	7.750	8.130	0.305	0.320
F	–	0.203	–	0.008
G	2.060	2.620	0.079	0.103
H	0.760	1.520	0.030	0.060

7. Carrier tape size



SYMBOL	W	E	F	DO	D1	PO
mm	16.00±0.30	1.75±0.10	7.50±0.10	1.55±0.05	1.55±0.10	4.00±0.10
SYMBOL	**P1**	**P2**	**A0**	**B0**	**KO**	**I**
mm	8.00±0.10	2.00±0.10	6.05±0.10	8.31±0.10	2.54±0.1	0.30±0.02

8. Marking Code



1. INPAQ LOGO
2. CONTROL CODE
3. TYPE NAME (By Device Marking Code)
4. CATHODE MARK (For Uni-direction Products Only)

9. PACKING

DEVICE TYPE	Q'TY/REEL (pcs)	REEL DIA. (mm)/(inch)
SMDJ-T Series	3000	330/13”