Features

- AEC-Q101 Qualified
- For surface mounted applications
- Low Profile Package
- Halogen Free. "Green" Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note 2)("P" Suffix Designates RoHS Compliant. See Ordering Information)

150 Watt TVS 5.0 to 90 Volts

Maximum Ratings

Parameter	Symbol	Value	Unit
Peak Pulse Power Surge Current with a 10/1000μs Waveform (Note 3)	I_{PPM}	See Next Table	A
Peak Pulse Power Dissipation(Note 3)	P_{PPM}	150	W
PowerDissipatoin on Infinite Heatsink at T_A= 25°C	P_D	1	W
Maximum instantaneous forward Voltage at I_F=1A	V_F	1.2	V
Peak forward surge current @8.3ms single half sine wave Unidirectional only	I_{FSM}	20	A

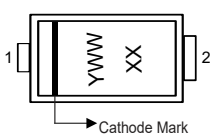
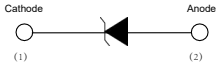
Thermal Characteristics(@ 25°C Unless Otherwise Specified)

Parameter	Symbol	Rating	Unit
Operating Junction Temperature Range	T_J	-55 to +150	˚C
Storage Temperature Range	T_{STG}	-55 to +150	˚C
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	100	℃/W
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	300	℃/W

Note:

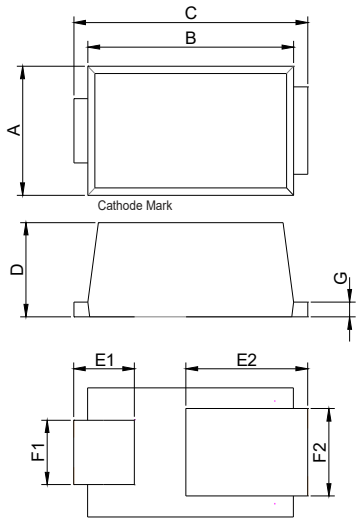
1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.
3. Non-repetitive current pulse, per Fig.3 and derated above T_A=25 °C per Fig.4.
4. 8.3ms, single half sine wave duty cycle = 4 pulses per Minutes maximum.
5. Mounted on P.C.B. with 5mm*5mm copper pad areas.

Internal Structure

Description	Simplified outline	Graphic symbol
Uni-directional		

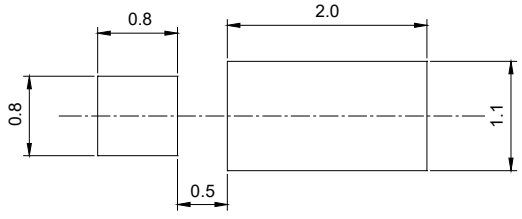
YWW= Date Code XX = Marking code

SOD-323HE-B



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.047	0.055	1.20	1.40	
B	0.083	0.091	2.10	2.30	
C	0.091	0.106	2.30	2.70	
D	0.035	0.039	0.90	1.00	
E1	0.022	0.030	0.55	0.75	
E2	0.043	0.059	1.10	1.50	
F1	0.022	0.030	0.55	0.75	
F2	0.031	0.039	0.78	0.98	
G	0.005	0.011	0.12	0.27	

Suggested Solder Pad Layout(mm)



Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC Part Number	Working Peak Reverse Voltage	Breakdown Voltage VBR @IT			Maximun Clamping Voltage @IPP	Maximum Reverse Surge Current	Maximum Reverse Leakage @VRWM	Device Marking Code
	V_{RWM}(V)	Min (V)	Max (V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(μA)	
SMHE5.0AHE3	5	6.4	7.07	10	9.2	16.3	400	AE
SMHE6.0AHE3	6	6.67	7.37	10	10.3	14.56	400	AG
SMHE6.5AHE3	6.5	7.22	7.98	10	11.2	13.39	250	AK
SMHE7.0AHE3	7	7.78	8.6	10	12	12.5	100	AM
SMHE7.5AHE3	7.5	8.33	9.21	1	12.9	11.63	50	AP
SMHE8.0AHE3	8	8.89	9.83	1	13.6	11.03	25	AR
SMHE8.5AHE3	8.5	9.44	10.4	1	14.4	10.42	10	AT
SMHE9.0AHE3	9	10	11.1	1	15.4	9.74	5	AV
SMHE10AHE3	10	11.1	12.3	1	17	8.82	2.5	AX
SMHE11AHE3	11	12.2	13.5	1	18.2	8.24	2.5	AZ
SMHE12AHE3	12	13.3	14.7	1	19.9	7.54	2.5	BE
SMHE13AHE3	13	14.4	15.9	1	21.5	6.98	1	BG
SMHE14AHE3	14	15.6	17.2	1	23.2	6.47	1	BK
SMHE15AHE3	15	16.7	18.5	1	24.4	6.15	1	BM
SMHE16AHE3	16	17.8	19.7	1	26	5.77	1	BP
SMHE17AHE3	17	18.9	20.9	1	27.6	5.43	1	BR
SMHE18AHE3	18	20	22.1	1	29.2	5.13	1	BT
SMHE19AHE3	19	21.1	23.3	1	30.6	4.90	1	BV
SMHE20AHE3	20	22.2	24.5	1	32.4	4.63	1	BX
SMHE22AHE3	22	24.4	26.9	1	35.5	4.23	1	BZ
SMHE24AHE3	24	26.7	29.5	1	38.9	3.86	1	CE
SMHE26AHE3	26	28.9	31.9	1	42.1	3.56	1	CG
SMHE28AHE3	28	31.1	34.4	1	45.4	3.30	1	CK
SMHE30AHE3	30	33.3	36.8	1	48.4	3.10	1	CM
SMHE33AHE3	33	36.7	40.6	1	53.3	2.81	1	CP
SMHE36AHE3	36	40	44.2	1	58.1	2.55	1	CR
SMHE40AHE3	40	44.4	49.1	1	64.5	2.32	1	CT
SMHE43AHE3	43	47.8	52.8	1	69.4	2.16	1	CV
SMHE45AHE3	45	50	55.3	1	72.7	2.06	1	CX
SMHE48AHE3	48	53.3	58.9	1	77.4	1.94	1	CZ
SMHE51AHE3	51	56.7	62.7	1	82.4	1.82	1	DE
SMHE54AHE3	54	60	66.3	1	87.1	1.72	1	DG
SMHE58AHE3	58	64.4	71.2	1	93.6	1.60	1	DK
SMHE60AHE3	60	66.7	73.7	1	96.8	1.54	1	DM
SMHE64AHE3	64	71.1	78.6	1	103	1.45	1	DP
SMHE70AHE3	70	77.8	86	1	113	1.33	1	DR
SMHE75AHE3	75	83.3	92.1	1	121	1.24	1	DT
SMHE78AHE3	78	86.7	95.8	1	126	1.19	1	DV
SMHE80AHE3	80	88.8	97.6	1	129	1.16	1	DX
SMHE85AHE3	85	94.4	104	1	137	1.09	1	DZ
SMHE90AHE3	90	100	111	1	146	1.03	1	EG

Curve Characteristics

Fig.1 - Peak Pulse Power Rating Curve

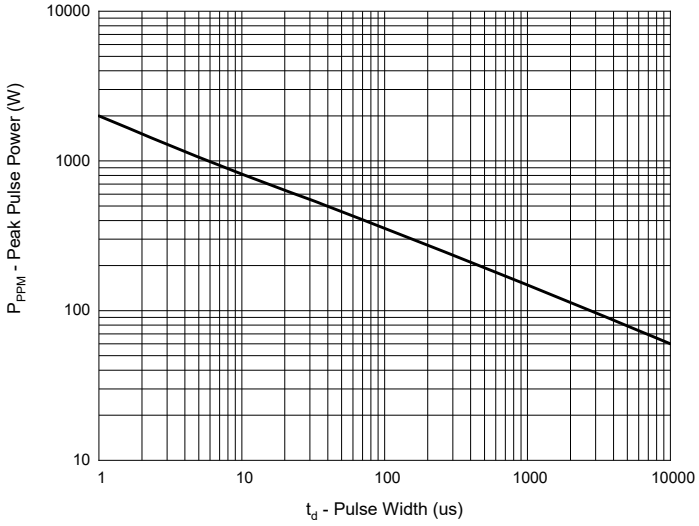


Fig. 2 - Typical Junction Capacitance

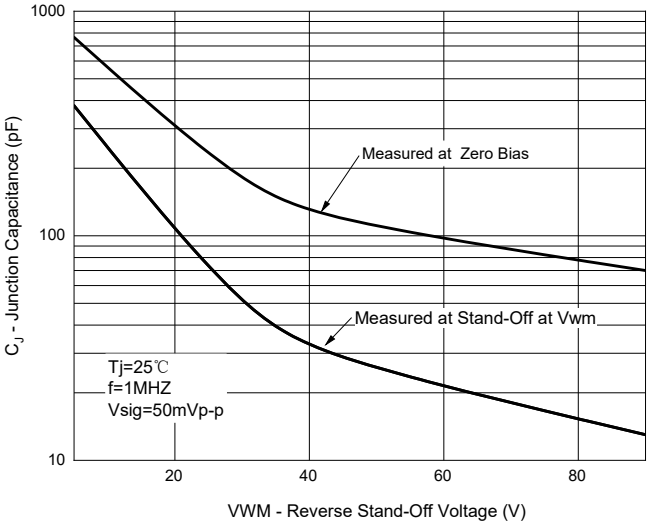


Fig. 3 - Pulse Waveform

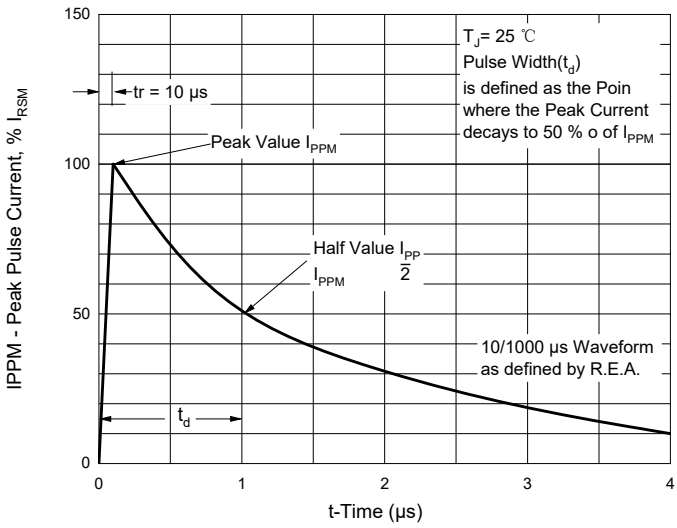
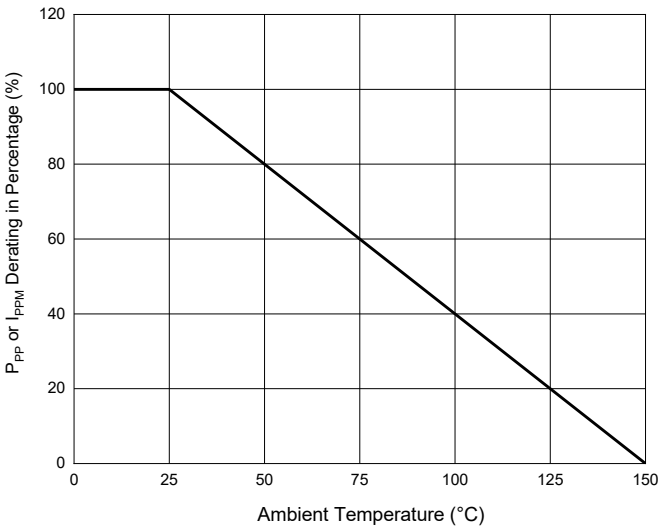


Fig. 4 - Pulse Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:2.5Kpcs/Reel

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