



### SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

Voltage

3.3~36 V

Power

150 W

#### **Features**

- Ultra thin profile package for space constrained utilization.
- High temperature soldering : 260°C/10 seconds at terminals
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard
- AEC-Q101 qualified

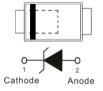
#### **Mechanical Data**

- Case: Molded plastic, SOD-323HE
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color Band denotes cathode end



SOD-323HE





# **Maximum Ratings and Thermal Characteristics** (T<sub>A</sub> = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Peak Pulse Power Dissipation(tp = 10/1000 us)	P <sub>PP</sub> (1,2)	150	W
Peak Pulse Current on tp = 10/1000 us waveform (Fig.2)	I <sub>PPM</sub> <sup>(1)</sup>	See table 1	Α
ESD IEC61000-4-2(Air)		±30	137
ESD IEC61000-4-2(Contact)	V <sub>ESD</sub>	±30	kV
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}^{(3)}$	300	°C/W
Operating Junction Temperature Range	$T_J$	-55~150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~150	°C





## **Electrical Characteristics** (T<sub>A</sub> = 25 °C unless otherwise noted)

	N/	$V_{BR}$		1.007	V el		Morking			
Part Number	$V_{RWM}$	Min.	Max.	I <sub>T</sub>	I <sub>R</sub> @V <sub>RWM</sub>	V <sub>C</sub> @I <sub>PP</sub>	Marking			
	V	V	V	mA	uA	V	Α	Code		
150W Transient Vo	150W Transient Voltage Suppressor									
P1CH3.3A-AU	3.3	5.2	6	10	50	8.5	17.6	2E1		
P1CH5.0A-AU	5	6.4	7	10	5	9.2	16.3	2E2		
P1CH6.0A-AU	6	6.67	7.37	10	5	10.3	14.5	2E3		
P1CH6.5A-AU	6.5	7.22	7.98	10	4	11.2	13.4	2E4		
P1CH7.0A-AU	7	7.78	8.6	10	4	12	12.5	2E5		
P1CH7.5A-AU	7.5	8.33	9.21	1	3	12.9	11.6	2E6		
P1CH8.0A-AU	8	8.89	9.83	1	2	13.6	11	2E7		
P1CH8.5A-AU	8.5	9.44	10.4	1	2	14.4	10.4	2E8		
P1CH9.0A-AU	9	10	11.1	1	1	15.4	9.7	2E9		
P1CH10A-AU	10	11.1	12.3	1	1	17	8.8	2EA		
P1CH11A-AU	11	12.2	13.5	1	1	18.2	8.2	2EC		
P1CH12A-AU	12	13.3	14.7	1	1	19.9	7.5	2ED		
P1CH13A-AU	13	14.4	15.9	1	0.5	21.5	7	2EE		
P1CH14A-AU	14	15.6	17.2	1	0.5	23.2	6.5	2EF		
P1CH15A-AU	15	16.7	18.5	1	0.5	24.4	6.1	2EH		
P1CH16A-AU	16	17.8	19.7	1	0.5	26	5.8	2EJ		
P1CH17A-AU	17	18.9	20.9	1	0.5	27.6	5.3	2EK		
P1CH18A-AU	18	20	22.1	1	0.5	29.2	5.1	2EL		
P1CH20A-AU	20	22	24.5	1	0.5	32.4	4.6	2EM		
P1CH22A-AU	22	24.4	26.9	1	0.5	35.5	4.2	2EN		
P1CH24A-AU	24	26.7	29.5	1	0.5	38.9	3.9	2EP		
P1CH26A-AU	26	28.9	31.9	1	0.5	42.1	3.6	2ER		
P1CH28A-AU	28	31.1	34.4	1	0.5	45.4	3.3	2ET		
P1CH30A-AU	30	33.3	36.8	1	0.5	48.4	3.1	2EU		
P1CH33A-AU	33	36.7	40.6	1	0.5	53.3	2.8	2EV		
P1CH36A-AU	36	40	44.2	1	0.5	58.1	2.6	2EW		

#### NOTES:

- 1. Non-repetitive current pulse, per Fig.3 and derated above  $T_A = 25$ °C per Fig.2
- 2. Mounted on a FR-4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area
- 3. Mounted on a FR4 PCB, single-sided copper, mini pad
- 4. TVS is a transient protection device, it is strongly recommended not to use as a Zener.





#### **TYPICAL CHARACTERISTIC CURVES**

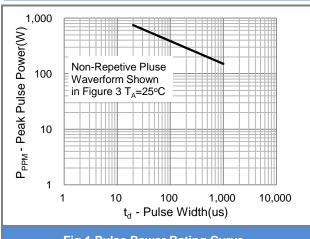


Fig.1 Pulse Power Rating Curve

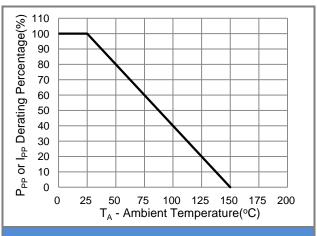
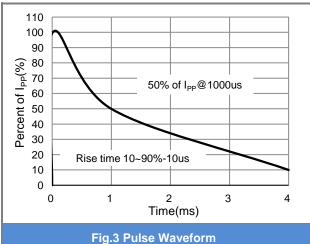


Fig.2 Derating Curve



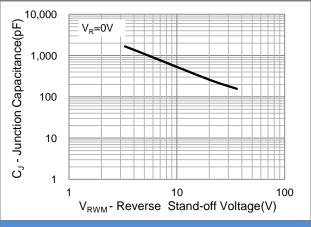


Fig.4 Typical Capacitance

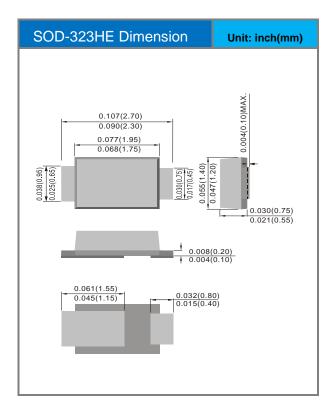


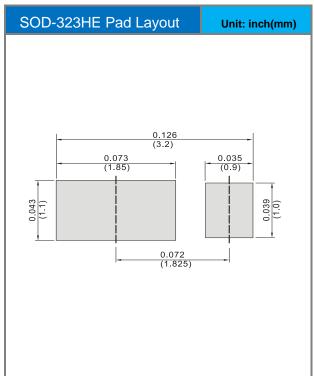


### **Part No Packing Code Version**

Part No Packing Code	Package Type	Packing Type	Marking	Version
P1CHxxxA-AU_R1_000A1	SOD-323HE	5K pcs / 7" reel	See Table	Halogen free

### **Packaging Information & Mounting Pad Layout**









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