SMDA05C-8 THRU SMDA24C-8

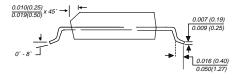
SURFACE MOUNT DIODE ARRAY TRANSIENT VOLTAGE SUPPRESSOR

Stand-off Voltage - 5.0 to 24 Volts Peak Pulse Power - 300 Watts

SO-14/MS-012-AB

0.337(8.55) 0.344(8.75) 1.4 8 0.150(3.80) 0.157(4.00) 0.228(5.80) 0.2244(6.20) 0.050(1.27) 0.050(1.27)





Dimensions in inches and (millimeters)

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Offers ESD protection in accordance with IEC1000-4-2 (IEC801-2)
- Monolithic TVS junctions
- ♦ 300W peak pulse power surge capability
- Excellent clamping capability
- ♦ Protection of up to eight data lines
- ◆ Fast response time: typically less than 5.0ns from 0 volts to V(BR)
- High temperature soldering guaranteed: 265°C for 5 seconds at terminals

MECHANICAL DATA

Case: JEDEC MS-012-AB molded plastic, over passivated junctions

Terminal: Plated, solderable per MIL-STD-750, Method 2026

Polarity: Bidirectional as marked

Mounting Position: Any

Weight: 0.07 ounce, 1.75 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS	
Peak power dissipation with a 8.0/20μs	РРРМ	Minimum 300	Watts	
Peak power pulse current with a	SMDA05C-8		20.0	
8.0/20μs waveform (NOTE 1)	SMDA12C-8	IPPM	15.0	Amps
	SMDA15C-8		12.0	
	SMDA24C-8		7.5	
Operating junction and storage tempera	T _J ,T _S TG	-50 to +125	°C	

NOTES

- (1) Non-repetitive current pulse, per Fig.3 and derated above $T_A=25^{\circ}C$ per Fig. 2
- (2) Mounted on copper pad areas of 0.045 x 0.030" (1.14 x 0.076mm) per leg

BIDIRECTIONAL APPLICATIONS

All electrical characteristics apply in both directions

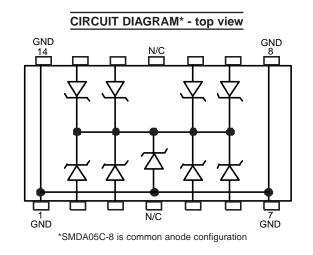


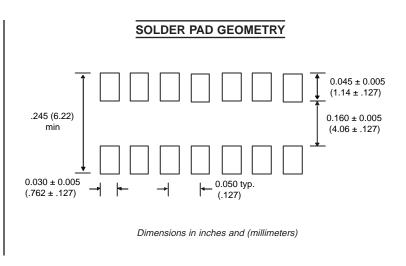
ELECTRICAL CHARACTERISTICS at 25°C											
PART NUMBER	DEVICE MARKING CODE	STAND-OFF VOLTAGE	MINIMUM BREAKDOWN VOLTAGE at IT=1.0mA (NOTE 1)	MAXIMUM CLAMPING VOLTAGE at IPP = 1A	MAXIMUM CLAMPING VOLTAGE at IPP = 5A	MAXIMUM REVERSE LEAKAGE CURRENT at Vwm	MAXIMUM JUNCTION CAPACITANCE (NOTE 3)				
BIDIREC	TIONAL	V _{WM} Volts	V _(BR) Volts	Vc (NOTE 2) Volts	V _C (NOTE 2) Volts	I _D μΑ	CJ pF				
SMDA05C-8	SEB	5.0	6.0*	9.8	11.0	100.0	350				
SMDA12C-8	SED	12.0	13.4	19.0	24.0	1.0	150				
SMDA15C-8	SEF	15.0	16.7	24.0	30.0	1.0	120				
SMDA24C-8	SEH	24.0	26.7	43.0	55.0	1.0	100				

NOTES:

- (1) $V_{(BR)}$ measured at pulse width of 300 μs sq. wave or equivalent
- (2) Surge current waveform per Fig. 3 and derate per Fig. 2
- (3) Junction capacitance measured at 1.0 MHz and applied V_R=0 volts * V_(BR) test current (I_T) is 10 mA

*Application note: Due to the topology of the SMDA array the V_{RWM} and $V_{(BR)}$ specifications also apply to the differential voltage between any two data line pins. Hence the SMDA12C-8 is designed to "see" a maximum voltage excursion of \pm 6 volts between any two data lines.





RATING AND CHARACTERISTIC CURVES FOR SMDA05C-8 THRU SMDA24C-8

