

MMAD1109 and MMAD1109e3

Switching Diode Array Steering Diode TVS Array™

DESCRIPTION

These low capacitance diode arrays are multiple, discrete, isolated junctions fabricated by a planar process and mounted in a 14-PIN package for use as steering diodes protecting up to seven I/O ports from ESD, EFT, or surge by directing them either to the positive side of the power supply line or to ground (see figure 1). An external TVS diode may be added between the positive supply line and ground to prevent overvoltage on the supply rail. They may also be used in fast switching core-driver applications. This includes computers and peripheral equipment such as magnetic cores, thin-film memories, plated-wire memories, etc., as well as decoding or encoding applications. These arrays offer many advantages of integrated circuits such as high-density packaging and improved reliability. This is a result of fewer pick and place operations, smaller footprint, smaller weight, and elimination of various discrete packages that may not be as user friendly in PC board mounting. They are available with either Tin-Lead plating terminations or as RoHS Compliant with annealed matte-Tin finish by adding an "e3" suffix to the part number.



Top Viewing Pin Layout



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MMAD1109e3

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Microsemi Scottsdale Division 8700 E. Thomas Rd. PO Box 1390, Scottsdale, AZ 85252 USA, (480) 941-6300, Fax: (480) 947-1503

300

20

1.5

5.0

75

90

0.200

20

Page 1

1.20

1.00



Switching Diode Array Steering Diode TVS Array™

SYMBOLS & DEFINITIONS					
Symbol	Definition				
V _{BR}	Minimum Breakdown Voltage: The minimum voltage the device will exhibit at a specified current.				
V _{RWM}	Working Peak Reverse Voltage: The maximum peak voltage that can be applied over the operating temperature range.				
VF	Maximum Forward Voltage: The maximum forward voltage the device will exhibit at a specified current.				
I _R	Maximum Leakage Current: The maximum leakage current that will flow at the specified voltage and temperature.				
С	Capacitance: The capacitance of the TVS as defined @ 0 volts at a frequency of 1 MHz and stated in picofarads.				

OUTLINE AND CIRCUIT



	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
Α	0.740	0.780	18.80	19.81
В	0.235	0.265	5.969	6.731
С	0.120	0.140	3.048	3.556
D	0.270	0.330	6.858	8.382
Е	0.320	0.380	8.128	9.652
F	0.100 BSC		2.540 BSC	
G	0.015	0.021	0.381	0.533
Н	0.017	0.023	0.431	0.584
I	0.140	0.160	3.556	4.064
J	0.040	0.070	1.016	1.778

OUTLINE



Supply rail (+V_{CC})



GND (or $-V_{CC}$)

STEERING DIODE APPLICATION

figure 1



CIRCUIT CONFIGURATION