

APPLICATIONS

- ✓ High Frequency Data Lines
- ✓ RS-232 & RS-422 Interface Networks
- ✓ Ethernet - 10/100 Base T
- ✓ Computer I/O Ports

IEC COMPATIBILITY (EN61000-4)

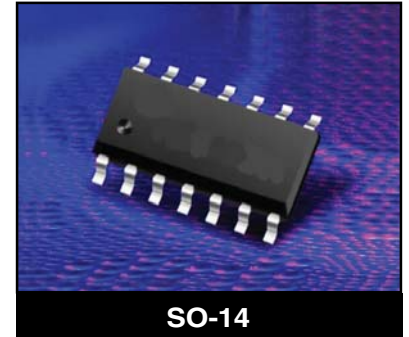
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 12A, 8/20 μ s Level 1(Line-Ground) & Level 2(Line-Line)

FEATURES

- ✓ 500 Milliwatt Continuous Power Dissipation
- ✓ ESD Protection > 40 kilovolts
- ✓ Monolithic Design
- ✓ Provides Protection for 7-10 I/O Lines
- ✓ Working Voltage > 50 Volts
- ✓ Low Leakage Current < 0.1 μ A
- ✓ Ultra Low Capacitance: 5pF Per Diode
- ✓ RoHS Compliant

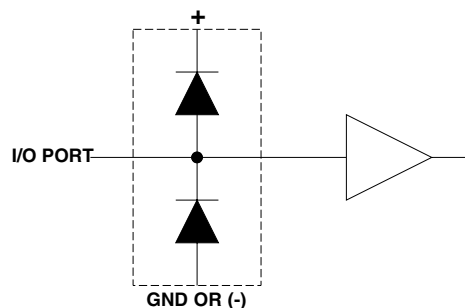
MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SO-14 Package
- ✓ Weight 0.15 grams (Approximate)
- ✓ Available in Lead-Free Pure-Tin Plating(Annealed)
- ✓ Solder Reflow Temperature:
Pure-Tin - Sn, 100: 260-270°C
- ✓ Consult Factory for Leaded Device Availability
- ✓ Flammability Rating UL 94V-0
- ✓ 16mm Tape and Reel Per EIA Standard 481
- ✓ Marking: Logo, Part Number, Date Code & Pin One Defined By Dot on Top of Package



SO-14

PIN CONFIGURATION



MMAD SERIES

DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

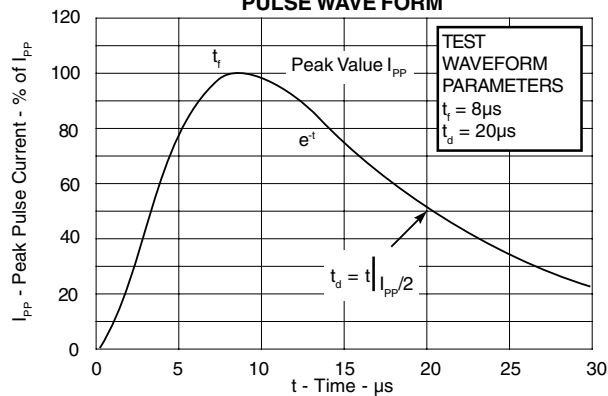
PARAMETER	SYMBOL	VALUE	UNITS
Continuous Power Dissipation	P_{PK}	500	Milliwatts
Continuous Forward Current (Single Diode)	I_P	400	mA
Repetitive Peak Forward Current @ $t_p = 5\mu s$, $F = 50kHz$	I_{FRM}	700	mA
Operating Temperature	T_A	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

PART NUMBER	REPETITIVE PEAK REVERSE VOLTAGE @ 10 μA V_{RRM} VOLTS	MAXIMUM FORWARD PEAK PULSE CURRENT @ 8/20 μs I_{FM} AMPS	MAXIMUM FORWARD VOLTAGE @ 100mA V_F VOLTS	MAXIMUM REVERSE LEAKAGE CURRENT V_{RRM} @ 40V I_R μA	MAXIMUM CAPACITANCE (Per Diode) @ 4V, 1MHz C_J pF
See Note 1	50	12	1.2	0.1	5

Note 1: Device types include: MMAD130, MMAD1103, MMAD1105, MMAD1106, MMAD1107 and MMAD1109. Electrical characteristics apply to all device types.

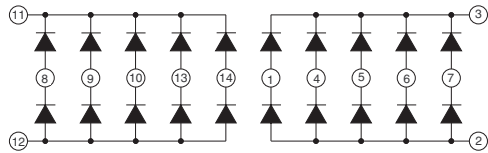
**FIGURE 1
PULSE WAVE FORM**



MMAD SERIES

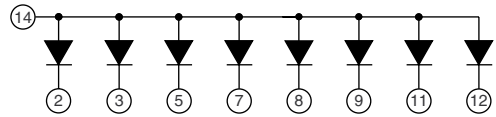
PIN CONFIGURATIONS

MMAD130



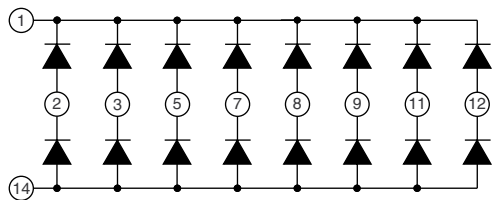
**DUAL 10 DIODE ARRAY
10 LINES OF PROTECTION**

MMAD1106



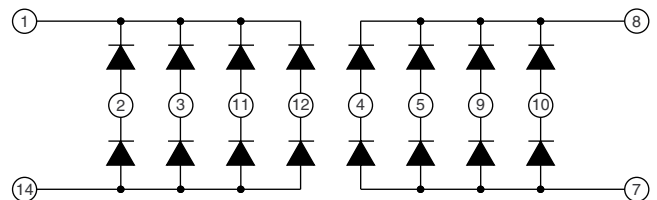
**8 DIODE COMMON ANODE ARRAY
NC PIN 1, 4, 6, 10 & 13
8 LINES OF PROTECTION**

MMAD1103



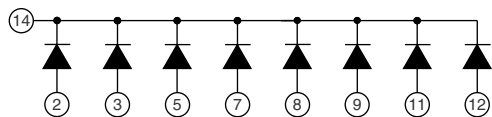
**16 DIODE ARRAY
NC PINS 4, 6, 10 & 13
8 LINES OF PROTECTION**

MMAD1107



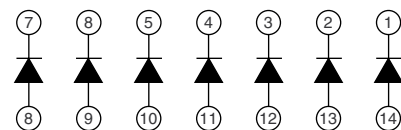
**DUAL 8 DIODE ARRAY
NC PINS 6 & 13
8 LINES OF PROTECTION**

MMAD1105



**8 DIODE COMMON CATHODE ARRAY
NC PINS 1, 4, 6, 10 & 13
8 LINES OF PROTECTION**

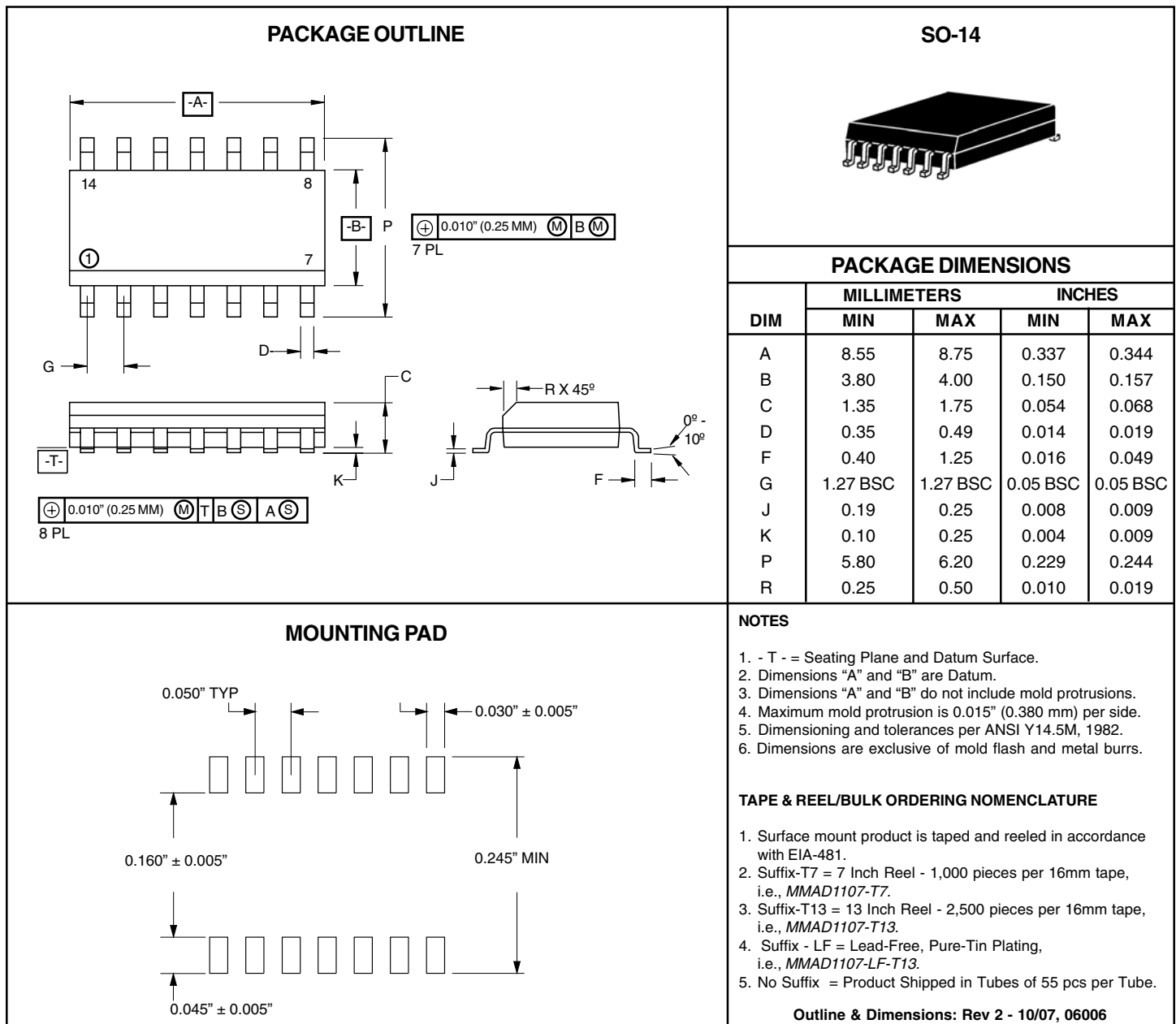
MMAD1109



**7 ISOLATED DIODE ARRAY
(INDEPENDENT)
7 LINES OF PROTECTION**

MMAD SERIES

SO-14 PACKAGE OUTLINE & DIMENSIONS



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ProTek Devices
 2929 South Fair Lane, Tempe, AZ 85282
 Tel: 602-431-8101 Fax: 602-431-2288
 E-Mail: sales@protekdevices.com
 Web Site: www.protekdevices.com

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[EMI5206MUTAG](#) [EMI6316FCTBG](#) [EMI8141MUTAG](#) [EMIF03-SIM05F3](#) [MSMP13A-M3/89A](#) [ESD5V0D5-TP](#) [ESD5Z6.0T5G](#)
[ESD7321MUT5G](#)