

STEERING DIODE ARRAY

APPLICATIONS

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

IEC COMPATIBILITY (EN61000-4)

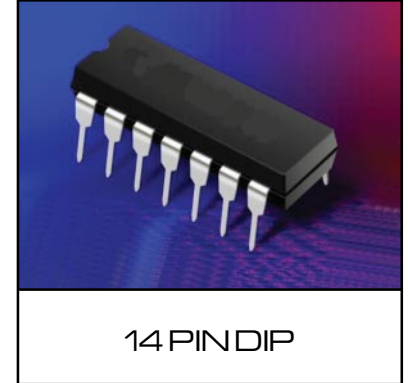
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 12A, 8/20 μ s Level 1(Line-Ground) & Level 2(Line-Line)

FEATURES

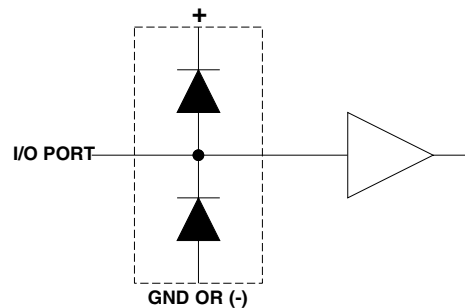
- ✓ 500 Milliwatt Continuous Power Dissipation
- ✓ ESD Protection > 40 kilovolts
- ✓ Monolithic Design
- ✓ Provides Protection for 7-10 I/O Lines
- ✓ Working Voltage > 50 Volts
- ✓ **LOW LEAKAGE CURRENT < 0.1 μ A**
- ✓ **ULTRA LOW CAPACITANCE: 5pF Per Diode**

MECHANICAL CHARACTERISTICS

- ✓ Molded 14 Pin Dual-In-Line (DIP) Package
- ✓ Weight 1.2 grams (Approximate)
- ✓ Flammability Rating UL 94V-0
- ✓ Packaging: 25 Pieces Per Tube
- ✓ Marking: Logo, Part Number, Date Code & Pin One Defined By Dot on Top of Package



CIRCUIT DIAGRAM

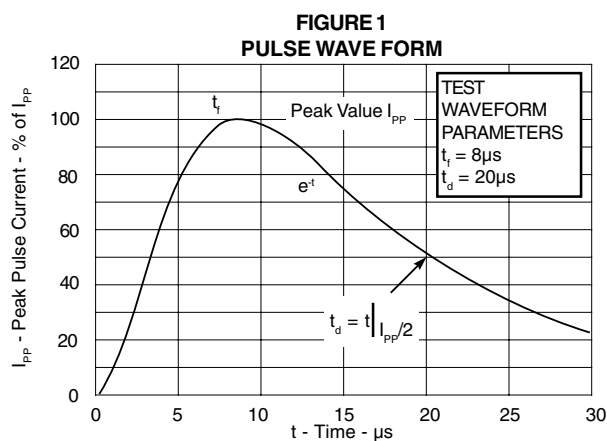


DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Continuous Power Dissipation	P_{PK}	500	Milliwatts
Continuous Forward Current (Single Diode)	I_F	400	mA
Repetitive Peak Forward Current @ $t_p=5\mu s, F=50kHz$	I_{FRM}	700	mA
Operating Temperature	T_J	-55°C to 150°C	°C
Storage Temperature	T_{STG}	-55°C to 150°C	°C

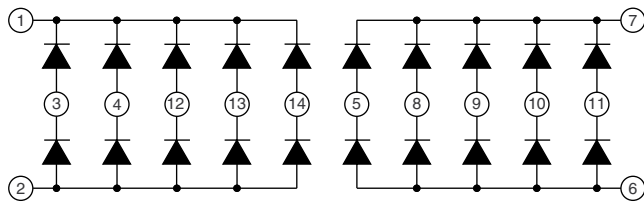
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified					
PART NUMBER	REPETITIVE PEAK REVERSE VOLTAGE @ 10 μ A V_{RRM} VOLTS	MAXIMUM FORWARD PEAK PULSE CURRENT @ 8/20 μ s I_{FM} AMPS	MAXIMUM FORWARD VOLTAGE @ 100mA V_F VOLTS	MAXIMUM REVERSE LEAKAGE CURRENT V_{RRM} @ 40V I_R μ A	MAXIMUM CAPACITANCE (Per Diode) @ 4V, 1 MHz C_i pF
See Note 1	50	12	1.2	0.1	5

Note 1: Device types include: MAD130, MAD1103, MAD1105, MAD1106, MAD1107 and MAD1109. Electrical characteristics apply to all device types.



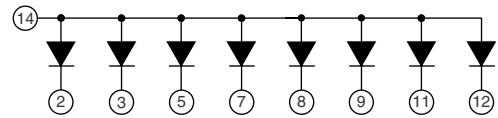
DEVICE CHARACTERISTICS

MAD130



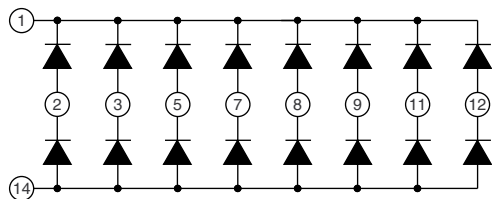
**DUAL 10 DIODE ARRAY
10 LINES OF PROTECTION**

MAD1106



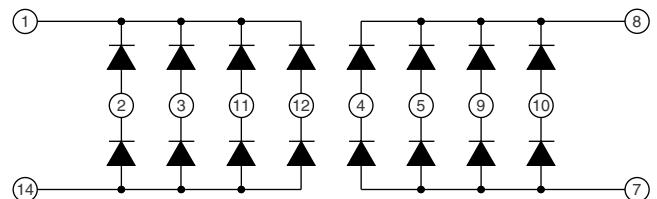
**8 DIODE COMMON ANODE ARRAY
NC PIN 1, 4, 6, 10 & 13
8 LINES OF PROTECTION**

MAD1103



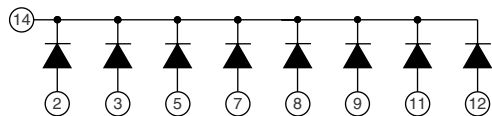
**16 DIODE ARRAY
NC PINS 4, 6, 10 & 13
8 LINES OF PROTECTION**

MAD1107



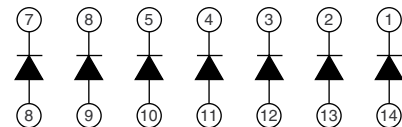
**DUAL 8 DIODE ARRAY
NC PINS 6 & 13
8 LINES OF PROTECTION**

MAD1105



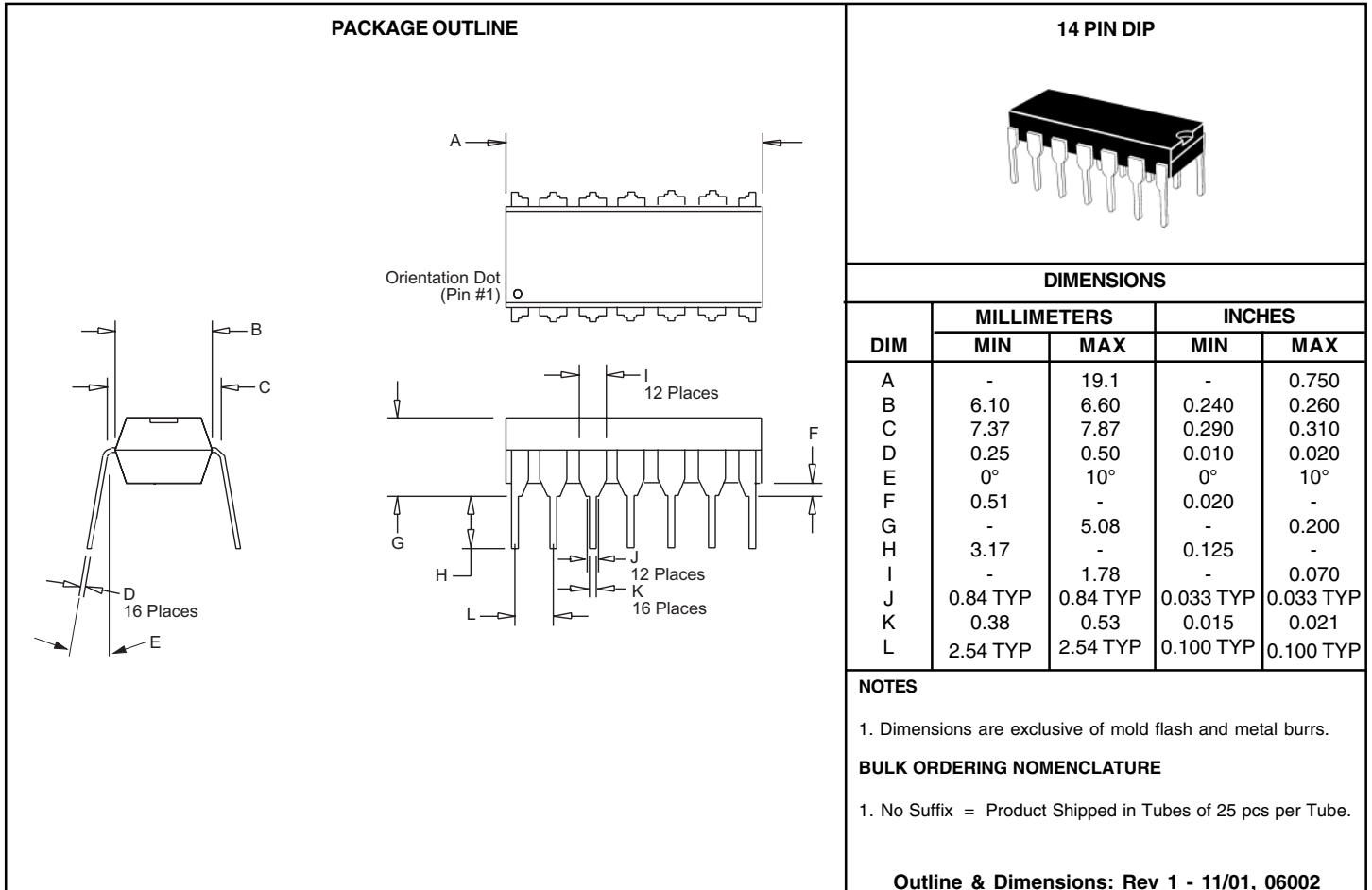
**8 DIODE COMMON CATHODE ARRAY
NC PINS 1, 4, 6, 10 & 13
8 LINES OF PROTECTION**

MAD1109



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

PACKAGE OUTLINE & DIMENSIONS



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