

## MONOLITHIC STEERING DIODE ARRAYS

### APPLICATIONS

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

### IEC COMPATIBILITY (EN61000-4)

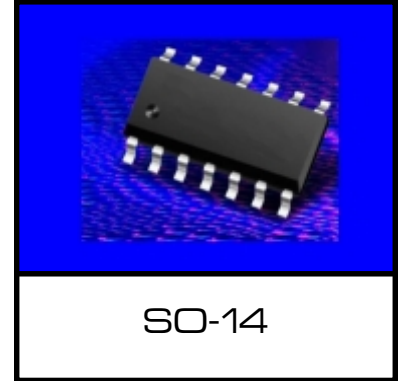
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 12A, 8/20µs - Level 1(Line-Gnd) & Level 2(Line-Line)

### FEATURES

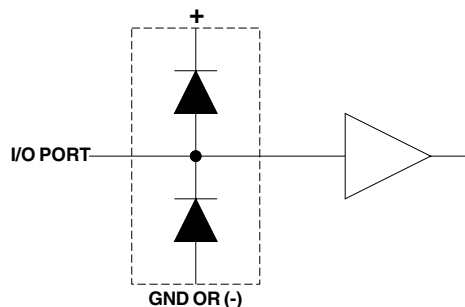
- ✓ 500 Milliwatt Continuous Power Dissipation
- ✓ ESD Protection > 40 kilovolts
- ✓ Monolithic Design
- ✓ Designed for I/O Protection
- ✓ Working Voltage > 50 Volts
- ✓ **LOW CAPACITANCE 5pF PER DIODE**

### MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SO-14 Package
- ✓ Weight 0.15 grams (Approximate)
- ✓ Flammability Rating UL 94V-0
- ✓ 16mm Tape and Reel Per EIA Standard 481
- ✓ Marking: Logo, Part Number, Date Code & Pin Number 1 Indicated By DOT on Top of Package



### CIRCUIT DIAGRAM

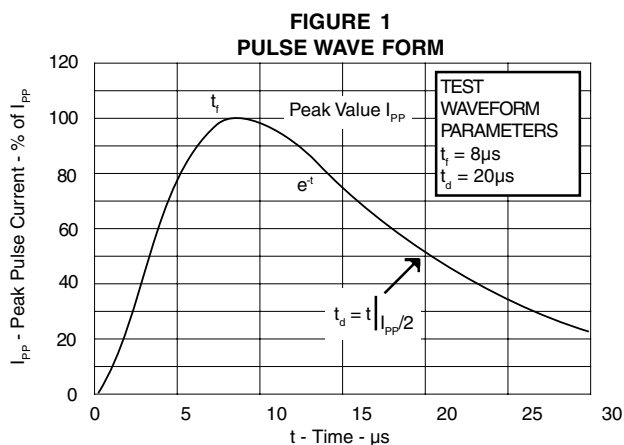


## DEVICE CHARACTERISTICS

| 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         |

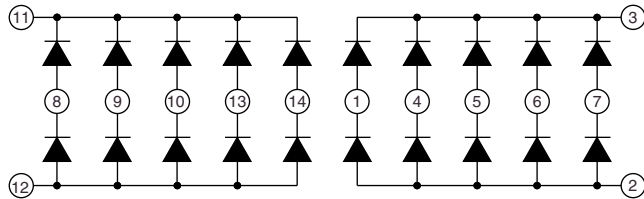
| ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified |                                                            |                                                      |                                                         |                                                   | 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

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



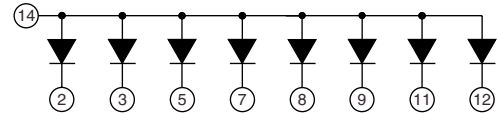
## PIN CONFIGURATIONS

**MMAD130**



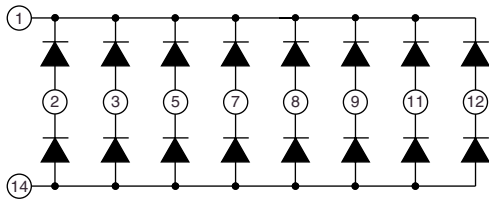
**DUAL 10 DIODE ARRAY**

**MMAD1106**



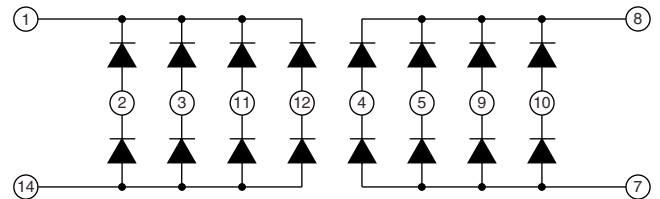
**8 DIODE COMMON ANODE ARRAY**  
NC PIN 1, 4, 6, 10 & 13

**MMAD1103**



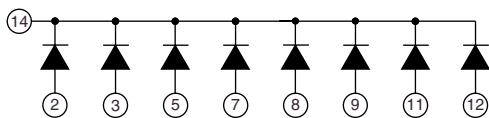
**14 DIODE ARRAY**  
NC PINS 4, 6, 10 & 13

**MMAD1107**



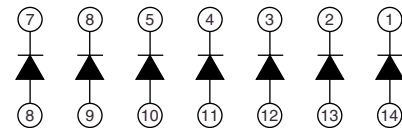
**DUAL 8 DIODE ARRAY**  
NC PINS 6 & 13

**MMAD1105**



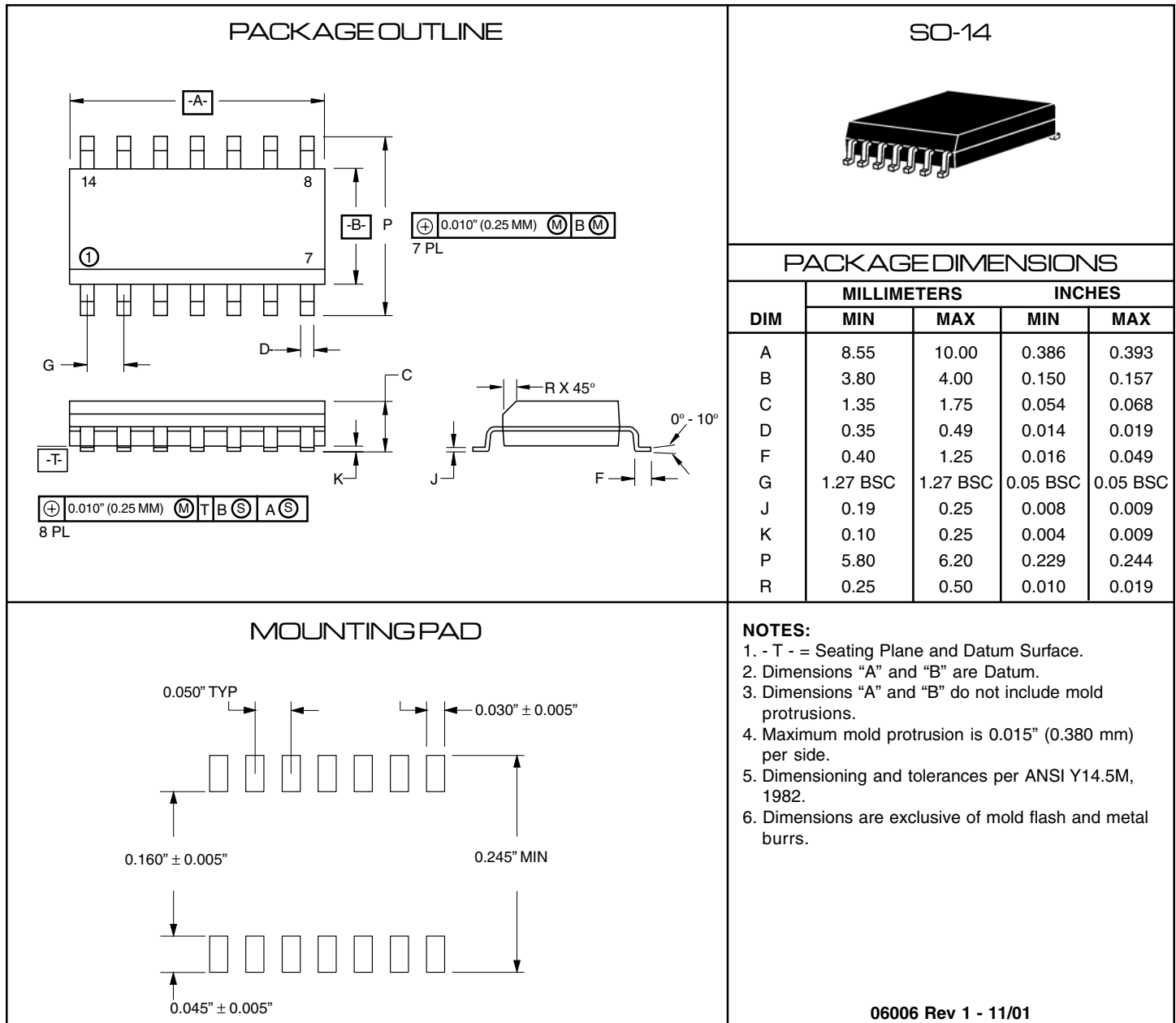
**8 DIODE COMMON CATHODE ARRAY**  
NC PINS 1, 4, 6, 10 & 13

**MMAD1109**



**7 ISOLATED DIODE ARRAY**  
(INDEPENDENT)

## PACKAGE OUTLINE & DIMENSIONS



### TAPE & REEL ORDERING INFORMATION:

Surface mount product is taped and reeled in accordance with EIA-481.  
 Suffix -T7: 7 Inch Reel - 1,000 pieces per reel (i.e., MMAD1106-T7).  
 Suffix -T13: 13 Inch Reel - 2,500 pieces per reel (i.e., MMAD1105-T13).  
 No Suffix: Bulk Quantities - 55 pieces per tube.

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