

## 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)

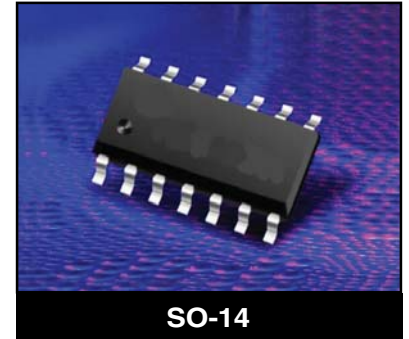
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 24A, 8/20 $\mu$ s Level 2(Line-Ground) & Level 3(Line-Line)

### FEATURES

- ✓ 500 Milliwatt Continuous Power Dissipation
- ✓ ESD Protection > 40 kilovolts
- ✓ Low Insertion Loss & Cross-Talk
- ✓ Provides Protection for 8 I/O Lines
- ✓ Working Voltage > 50 Volts
- ✓ Low Leakage Current < 0.1 $\mu$ A
- ✓ Ultra Low Capacitance: 5pF Per Diode
- ✓ RoHS Compliant

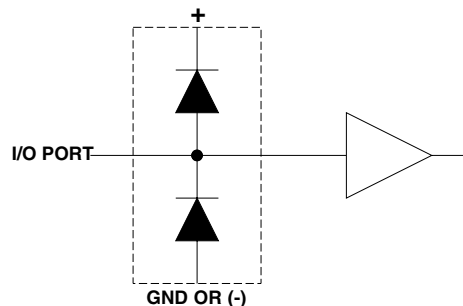
### MECHANICAL CHARACTERISTICS

- ✓ 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



# PMMAD SERIES

## DEVICE CHARACTERISTICS

### MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

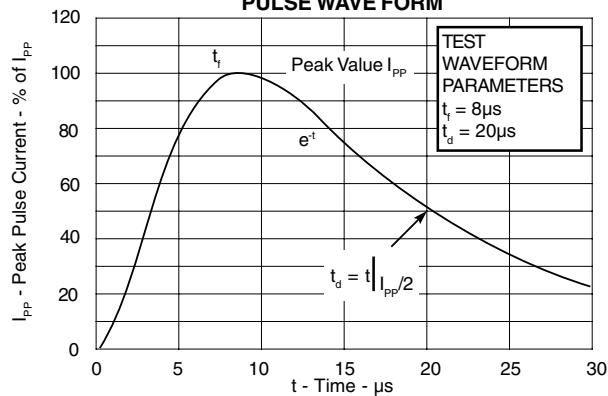
| PARAMETER  | SYMBOL    | VALUE      | UNITS      |
|--|-----------|------------|------------|
| Continuous Power Dissipation                                   | $P_{PK}$  | 500        | Milliwatts |
| Continuous Forward Current (Single Diode)                      | $I_P$     | 400        | mA         |
| 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<br><br>@ 10 $\mu A$<br>$V_{RRM}$<br>VOLTS | MAXIMUM FORWARD PEAK PULSE CURRENT<br><br>@ 8/20 $\mu s$<br>$I_{FM}$<br>AMPS | MAXIMUM FORWARD VOLTAGE<br><br>@ 100mA<br>$V_F$<br>VOLTS | MAXIMUM REVERSE LEAKAGE CURRENT<br><br>$V_{RRM}$ @ 40V<br>$I_R$<br>$\mu A$ | MAXIMUM CAPACITANCE (Per Diode)<br><br>@ 4V, 1MHz<br>$C_j$<br>pF |
|-------------|---|--|--|--|--|
| See Note 1  | 50  | 40   | 1.2  | 0.1  | 5  |

**Note 1:** Device types include: PMMAD1103, PMMAD1105, PMMAD1106 and PMMAD1109. Electrical characteristics apply to all device types.

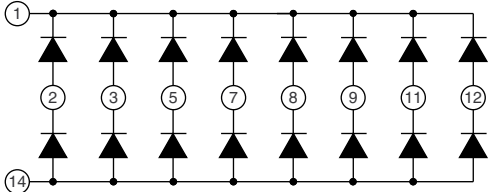
**FIGURE 1  
PULSE WAVE FORM**



# PMMAD SERIES

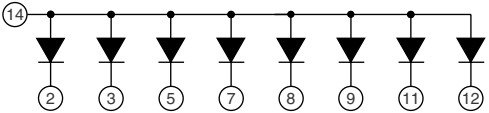
## PIN CONFIGURATIONS

**PMMAD1103**



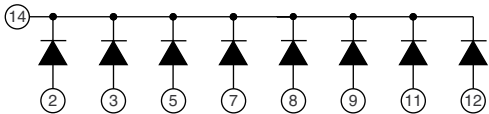
**16 DIODE ARRAY**  
**NC PINS 4, 6, 10 & 13**  
**8 LINES OF PROTECTION**

**PMMAD1106**



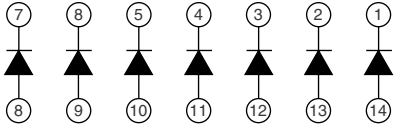
**8 DIODE COMMON ANODE ARRAY**  
**NC PIN 1, 4, 6, 10 & 13**  
**8 LINES OF PROTECTION**

**PMMAD1105**



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

**PMMAD1109**



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

# PMMAD SERIES

## SO-14 PACKAGE OUTLINE & DIMENSIONS

### PACKAGE OUTLINE

**SO-14**

| DIM | MILLIMETERS |          | INCHES   |          |
|-----|-------------|----------|----------|----------|
|     | MIN         | MAX      | MIN      | MAX      |
| A   | 8.55        | 10.00    | 0.386    | 0.393    |
| B   | 3.80        | 4.00     | 0.150    | 0.157    |
| C   | 1.35        | 1.75     | 0.054    | 0.068    |
| D   | 0.35        | 0.49     | 0.014    | 0.019    |
| F   | 0.40        | 1.25     | 0.016    | 0.049    |
| G   | 1.27 BSC    | 1.27 BSC | 0.05 BSC | 0.05 BSC |
| J   | 0.19        | 0.25     | 0.008    | 0.009    |
| K   | 0.10        | 0.25     | 0.004    | 0.009    |
| P   | 5.80        | 6.20     | 0.229    | 0.244    |
| R   | 0.25        | 0.50     | 0.010    | 0.019    |

### MOUNTING PAD

**NOTES**

- T = Seating Plane and Datum Surface.
- Dimensions "A" and "B" are Datum.
- Dimensions "A" and "B" do not include mold protrusions.
- Maximum mold protrusion is 0.015" (0.380 mm) per side.
- Dimensioning and tolerances per ANSI Y14.5M, 1982.
- Dimensions are exclusive of mold flash and metal burrs.

**TAPE & REEL/BULK ORDERING NOMENCLATURE**

- Surface mount product is taped and reeled in accordance with EIA-481.
- Suffix-T7 = 7 Inch Reel - 1,000 pieces per 16mm tape, i.e., *PMMAD1107-T7*.
- Suffix-T13 = 13 Inch Reel - 2,500 pieces per 16mm tape, i.e., *PMMAD1107-T13*.
- Suffix - LF = Lead-Free, Pure-Tin Plating, i.e., *PMMAD1107-LF-T13*.
- No Suffix = Product Shipped in Tubes of 55 pcs per Tube.

**Outline & Dimensions: Rev 1 - 11/01, 06006**

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