

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)**

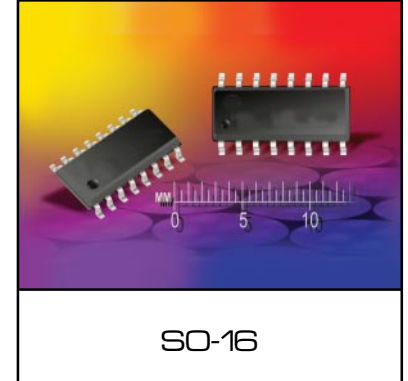
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 12A, 8/20µs Level 1 (Line-Ground) & Level 2 (Line-Line)

**FEATURES**

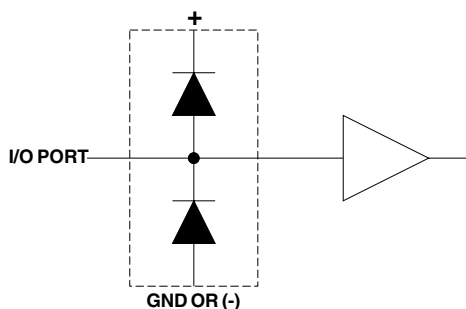
- ✓ 500 Milliwatt Continuous Power Dissipation
- ✓ ESD Protection > 40 kilovolts
- ✓ Monolithic Design
- ✓ Provides Protection for 8 I/O Lines
- ✓ Working Voltage > 50 Volts
- ✓ **LOW LEAKAGE CURRENT < 0.1µA**
- ✓ **ULTRA LOW CAPACITANCE: 5pF Per Diode**
- ✓ RoHS Compliant in Lead-Free Versions

**MECHANICAL CHARACTERISTICS**

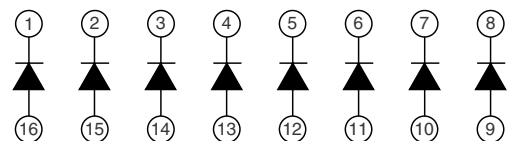
- ✓ Molded JEDEC SO-16 Package
- ✓ Weight 0.15 grams (Approximate)
- ✓ Available in Tin-Lead or Lead-Free Pure-Tin Plating(Annealed)
- ✓ Solder Reflow Temperature:
  - Tin-Lead - Sn/Pb, 85/15: 240-245°C
  - Pure-Tin - Sn, 100: 260-270°C
- ✓ Flammability rating UL 94V-0
- ✓ 16mm Tape & Reel Per EIA Standard 481
- ✓ Marking: Logo, Part Number, Date Code & Pin One Defined By Dot on Top of Package



**CIRCUIT DIAGRAM**



**PIN CONFIGURATION**



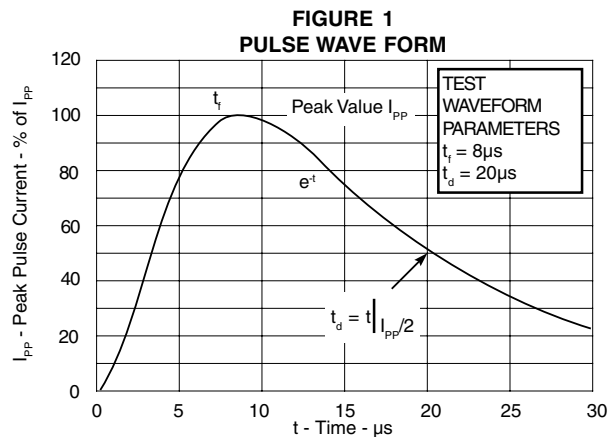
**8 ISOLATED DIODE ARRAY  
8 LINES OF PROTECTION**

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## 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 $\mu A$ $V_{RRM}$ VOLTS	MAXIMUM FORWARD PEAK PULSE CURRENT @ 8/20 $\mu s$ $I_{FM}$ AMPS	MAXIMUM FORWARD VOLTAGE @ 100mA $V_F$ VOLTS	MAXIMUM REVERSE LEAKAGE CURRENT $V_{RRM}$ @ 40V $I_R$ $\mu A$	MAXIMUM CAPACITANCE (Per Diode) @ 4V, 1 MHz $C_i$ pF
MMAD1108	50	12	1.2	0.1	5



## PACKAGE OUTLINE & DIMENSIONS

### PACKAGE OUTLINE

⊕ 0.010" (0.25 MM)
M
T
B
A
S

### SO-16

### PACKAGED DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.80	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

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### 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., *MMAD1108-T7*.
- Suffix-T13 = 13 Inch Reel - 2,500 pieces per 16mm tape, i.e., *MMAD1108-T13*.
- Suffix - LF = Lead-Free, Pure-Tin Plating, i.e., *MMAD1108-LF-T7*.
- No Suffix = Product Shipped in Tubes of 37 pcs per Tube.

**Outline & Dimensions: Rev 1 - 11/01, 06007**

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DESIGN CHANGES: ProTek reserves the right to discontinue product lines without notice, and that the final judgement concerning selection and specifications is the buyer's and that in furnishing engineering and technical assistance, ProTek assumes no responsibility with respect to the selection or specifications of such products.

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