



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 7-10 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

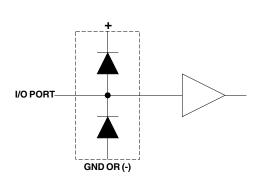
- ✓ Molded JEDEC SO-14 Package
- ✓ Weight 0.15 grams (Approximate)
- ✔ Available in Tin-Lead or Lead-Free Pure-Tin Plating(Annealed)
- ✓ Solder Reflow Temperature:

Tin-Lead - Sn/Pb, 85/15: 240-245°C

Pure-Tin - Sn, 100: 260-270°C

- ✓ Flammability rating UL 94V-0
- ✓ 16mm Tape and Reel Per EIA Standard 481
- ✓ Marking: Logo, Part Number, Date Code & Pin One Defined By Dot on Top of Package

CIRCUIT DIAGRAM





SO-14

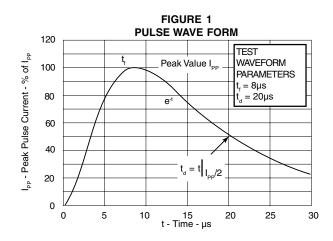


DEVICE CHARACTERISTICS

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 =5µs, F=50kHz	l _{FRM}	700	mA			
Operating Temperature	T_{J}	-55°C to 150°C	°C			
Storage Temperature	T _{STG}	-55°C to 150°C	°C			

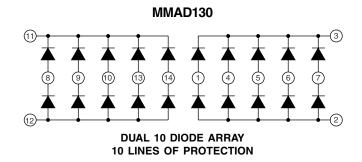
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified							
PART NUMBER	REPETITIVE PEAK REVERSE VOLTAGE @ 10µA V _{RRM} VOLTS	MAXIMUM FORWARD PEAK PULSE CURRENT @8/20µs I _{FM} AMPS	MAXIMUM FORWARD VOLTAGE @100mA V _F VOLTS	MAXIMUM REVERSE LEAKAGE CURRENT V _{RRM} @ 40V I _R μΑ	MAXIMUM CAPACITANCE (Per Diode) @ 4V, 1 MHz C _i pF		
See Note 1	50	12	1.2	0.1	5		

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

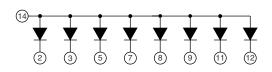




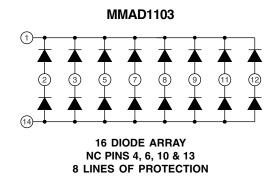
DEVICE CHARACTERISTICS

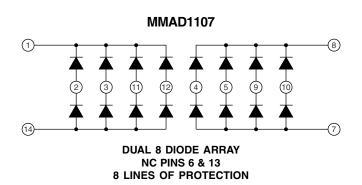




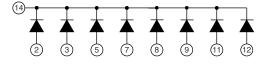


8 DIODE COMMON ANODE ARRAY NC PIN 1, 4, 6, 10 & 13 8 LINES OF PROTECTION



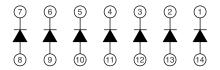






8 DIODE COMMON CATHODE ARRAY NC PINS 1, 4, 6, 10 & 13 8 LINES OF PROTECTION

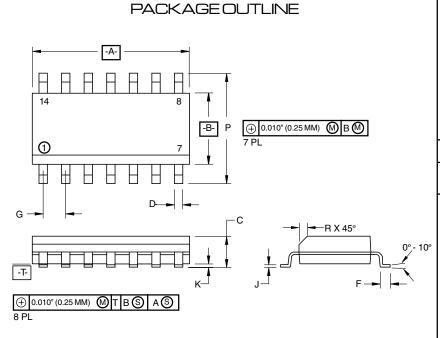
MMAD1109



7 ISOLATED DIODE ARRAY (INDEPENDENT) 7 LINES OF PROTECTION



PACKAGE OUTLINE & DIMENSIONS



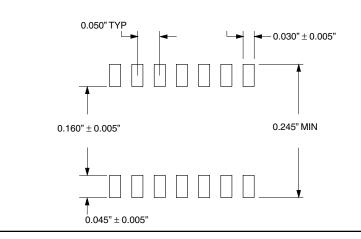
SO-14



PACKAGE DIMENSIONS

	MILLIMETERS		INCHES	
DIM	MIN	MAX	MIN	MAX
Α	8.55	10.00	0.386	0.393
В	3.80	4.00	0.150	0.157
С	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
Р	5.80	6.20	0.229	0.244
R	0.25	0.50	0.010	0.019

MOUNTINGPAD



NOTES

- T = Seating Plane and Datum Surface.
 Dimensions "A" and "B" are Datum.
 Dimensions "A" and "B" do not include mold protrusions.
- 4. Maximum mold protrusion is 0.015" (0.380 mm) per side.
- 5. Dimensioning and tolerances per ANSI Y14.5M, 1982. 6. Dimensions are exclusive of mold flash and metal burrs.

TAPE & REEL/BULK ORDERING NOMENCLATURE

- 1. Surface mount product is taped and reeled in accordance with EIA-481.
- 2. Suffix-T7 = 7 Inch Reel 1,000 pieces per 16mm tape, i.e., MMAD1107-T7.
- 3. Suffix-T13 = 13 Inch Reel 2,500 pieces per 16mm tape, i.e., MMAD1107-T13.
- 4. Suffix LF = Lead-Free, Pure-Tin Plating, i.e., MMAD1107-LF-T13.
- 5. No Suffix = Product Shipped in Tubes of 55 pcs per Tube.

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

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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