

EMI FILTER/TVS ARRAY

APPLICATIONS

Integrated I/O Protection & Filtering Solutions For:

- ✓ Cellular Phones
- ✓ Color LCD Display Panel
- ✓ Notebooks
- ✓ Personal Digital Assistant (PDA)
- ✓ Ground Positioning System (GPS)
- ✓ SMART Cards

IEC COMPATIBILITY (EN61000-4)

- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns

FEATURES

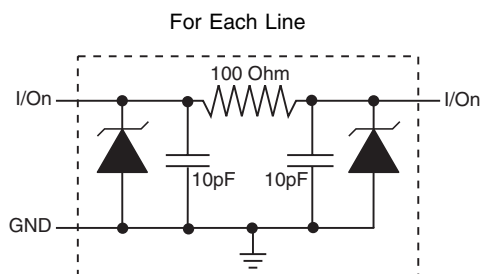
- ✓ ESD Protection > 25 kilovolts
- ✓ EMI Filtering/TVS Low Pass Filters
- ✓ > 25db Attenuation from 800MHz to 3GHz
- ✓ Protects Up to Four(4) Data Lines
- ✓ RoHS Compliant in Lead-Free Versions

MECHANICAL CHARACTERISTICS

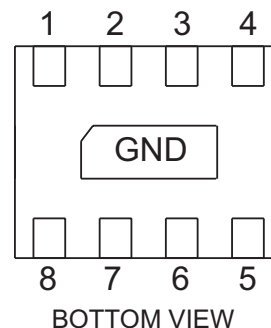
- ✓ DFN-8 Package
- ✓ Available in Tin-Lead or Lead-Free Pure-Tin Plating(Annealed)
- ✓ Solder Reflow Temperature:
 - Tin-Lead - Sn/Pb, 85/15: 240-245°C
 - Pure-Tin - Sn, 100: 260-270°C
- ✓ Flammability rating UL 94V-0
- ✓ Device Marking: Marking Code
- ✓ 8mm Tape and Reel Per EIA Standard 481



PIN CONFIGURATION



Note: I/O connected from pins 1-8, 2-7, 3-6 and 4-5.

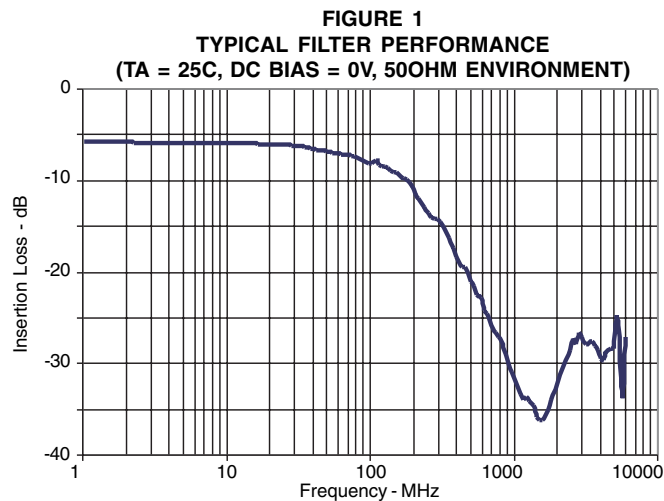


DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Operating Temperature	T_J	-40°C to 85°C	°C
Storage Temperature	T_{STG}	-55°C to 150°C	°C
DC Power Per Resistor	P	400	mW
Typical Resistance @ $\pm 20\%$	R	100	OHMS
Soldering Temperature for 10 seconds	T_L	265°C	°C

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified								
PART NUMBER	DEVICE MARKING	RATED STAND-OFF VOLTAGE	MINIMUM BREAKDOWN VOLTAGE	MAXIMUM REVERSE LEAKAGE CURRENT	TYPICAL FORWARD VOLTAGE	MINIMUM ATTENUATION	CUT-OFF FREQUENCY (50 OHMS I/O) ZERO BIAS	TYPICAL CAPACITANCE PER LINE (See Note 1)
		V_{WM} VOLTS	@ 1mA $V_{(BR)}$ VOLTS	@ 3V I_D μA	@ 10mA V_F VOLTS	@ 800-3000 MHz dB	f_c MHz	@ 2.5V, 1MHz C pF
EM4D-100L	M4D10L	5.0	6.0	0.1	0.8	25	150	20

Note 1: 30pF @ 0V, 1MHz, $\pm 20\%$ tolerance.



GRAPHS

FIGURE 2
RESISTANCE VS TEMPERATURE
(Normalized to Resistance at 25°C)

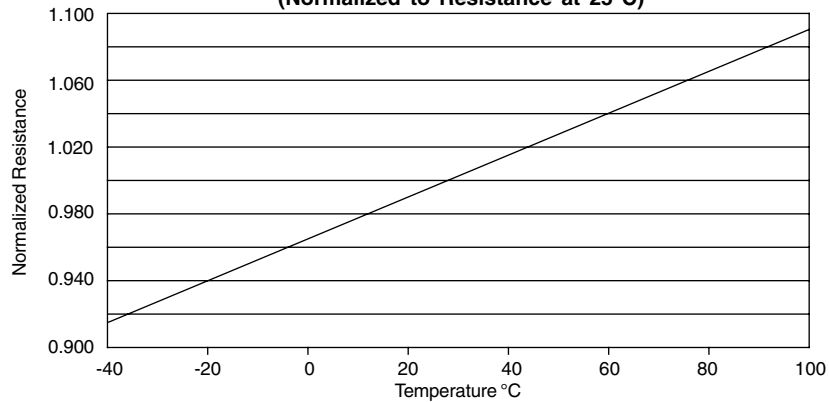


FIGURE 3
CAPACITANCE VS REVERSE VOLTAGE
(Normalized to Capacitance at 2.5V DC & 25°C)

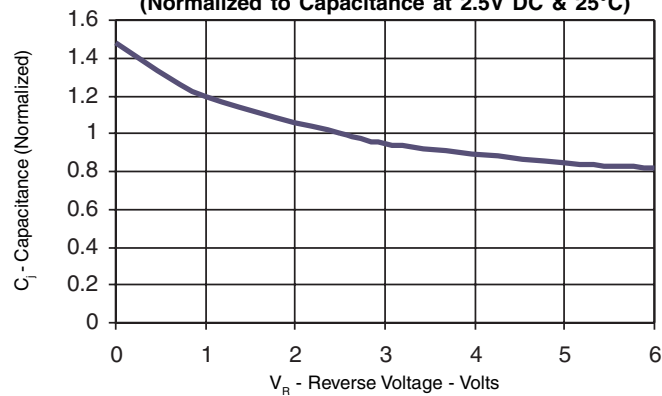
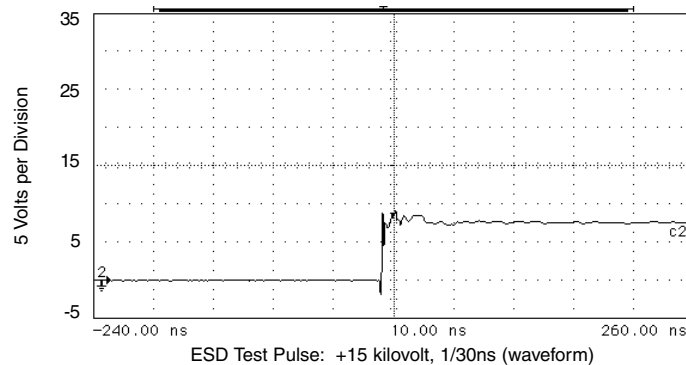
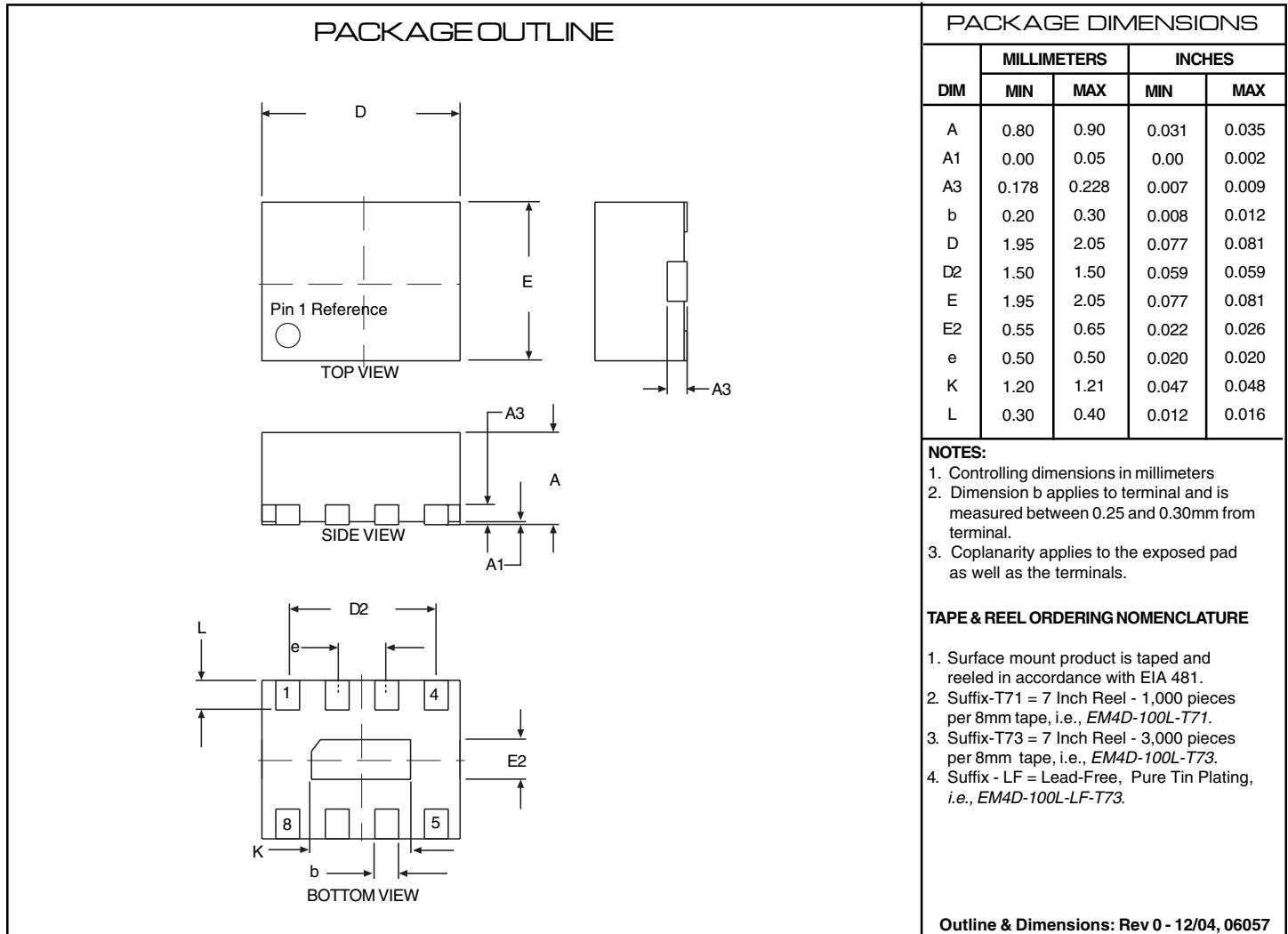


FIGURE 4
OVERSHOOT & CLAMPING VOLTAGE



PACKAGE OUTLINE & DIMENSIONS



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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