



EM4D-100L

EMI FILTER/TVS ARRAY

APPLICATIONS

- ✓ 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

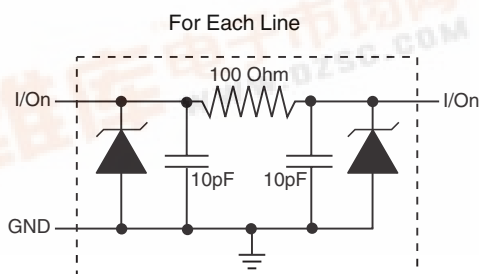
- ✓ ESD Protection > 25 kilovolts
- ✓ EMI Filtering/TVS Low Pass Filters
- ✓ Blocking Rectifier
- ✓ > 25db Attenuation from 800MHz to 3GHz
- ✓ Protects up to Four(4) Data Lines
- ✓ RoHS Compliant

MECHANICAL CHARACTERISTICS

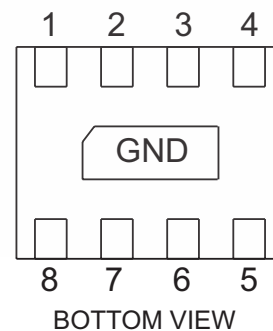
- ✓ DFN-8 Package
- ✓ Available in Lead-Free Pure-Tin Plating(Annealed)
- ✓ Solder Reflow Temperature:
Pure-Tin - Sn, 100: 260-270°C
- ✓ Consult Factory for Leaded Device Availability
- ✓ Flammability Rating UL 94V-0
- ✓ Device Marking: Marking Code
- ✓ 8mm Tape and Reel Per EIA Standard 481



PIN CONFIGURATION



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



EM4D-100L

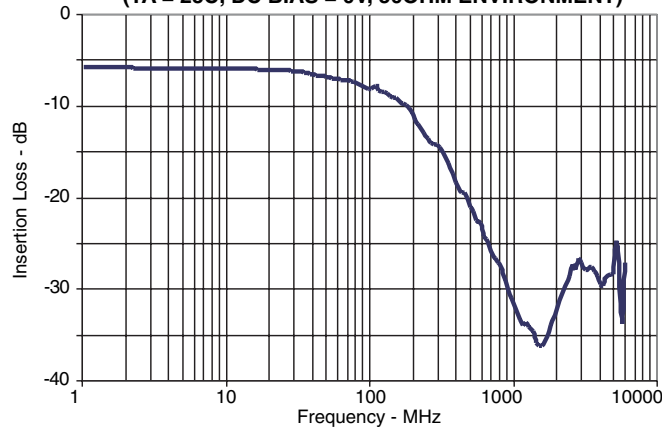
DEVICE CHARACTERISTICS

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

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

Note 1: 30pF @ 0V, 1MHz, ± 20% tolerance.

FIGURE 1
TYPICAL FILTER PERFORMANCE
($T_A = 25C$, DC BIAS = 0V, 50OHM ENVIRONMENT)



EM4D-100L

GRAPHS

FIGURE 1
RESISTANCE VS TEMPERATURE
(Normalized to Resistance at 25°C)

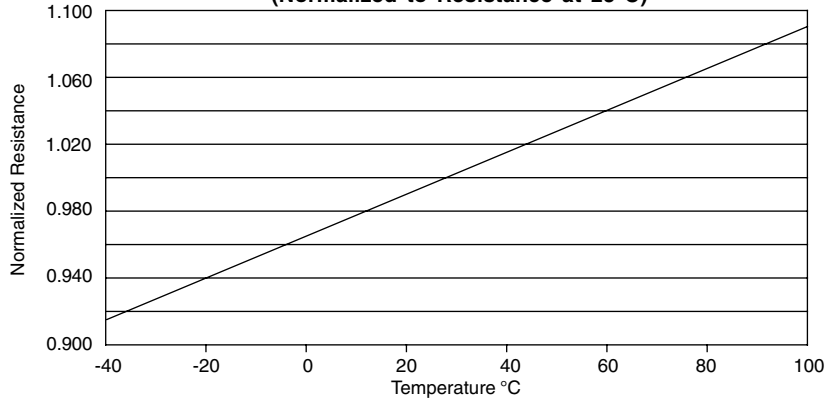


FIGURE 3
CAPACITANCE VS REVERSE VOLTAGE
(Normalized to Capacitance at 2.5V DC & 25°C)

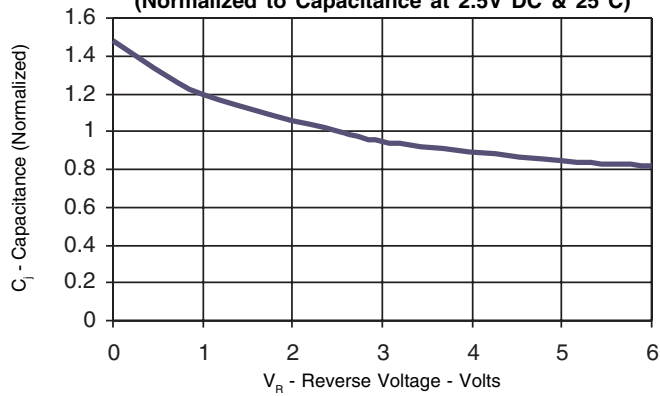


FIGURE 4
OVERSHOOT & CLAMPING VOLTAGE (through the filter)

