

LCD - EMI FILTER/TVS ARRAY**APPLICATIONS**

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

IEC COMPATIBILITY (EN61000-4)

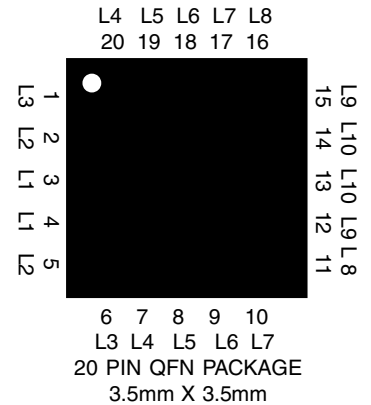
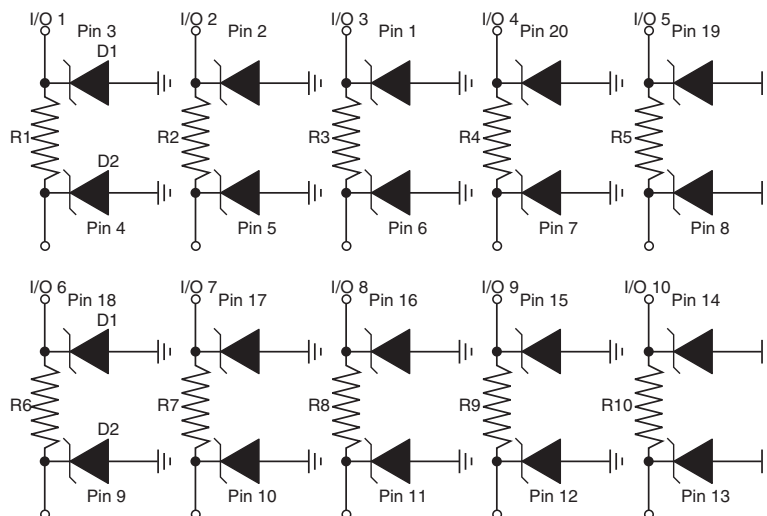
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns

FEATURES

- ✓ ESD Protection > 25 kilovolts
- ✓ Bidirectional EMI Filtering/TVS Low Pass Filters
- ✓ Low Insertion Loss: -3db Roll-Off @ 140MHz
- ✓ Protects Up to Ten(10) Data Lines
- ✓ RoHS Compliant on Lead-Free Versions

MECHANICAL CHARACTERISTICS

- ✓ QFN-20 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
- ✓ Marking: Logo, Marking Code and Pin One Defined By Dot on Package

**PIN CONFIGURATION**

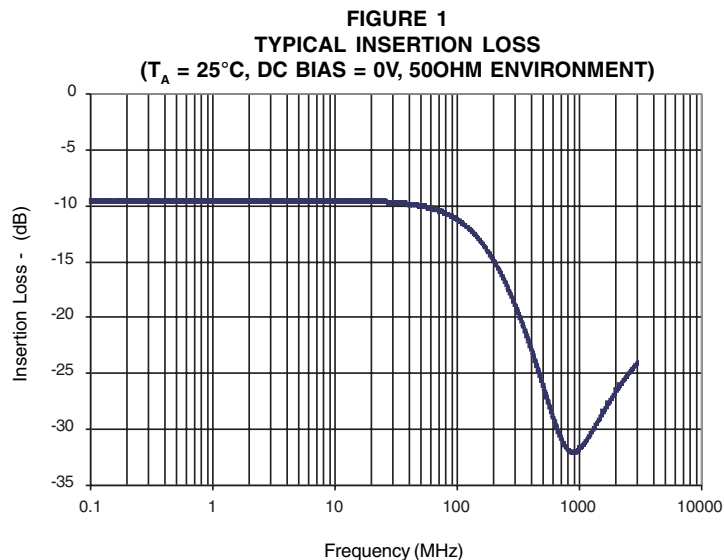
Note: Center Tab as the Ground.

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 | 100 | mW |
| Typical Resistance @ ± 15% | R | 200 | OHMS |
| Soldering Temperature for 10 seconds | T_L | 265°C | °C |

| ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified | | | | | | | |
|---|-------------------------|---------------------------|---------------------------------|-------------------------|---------------------|---|---|
| PART NUMBER | 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) |
| | | | | | | | |
| EM10Q-200 | 5.0 | 6.0 | 0.1 | 0.8 | 25 | 140 | 20 |

Note 1: ±20% tolerance.



GRAPHS

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

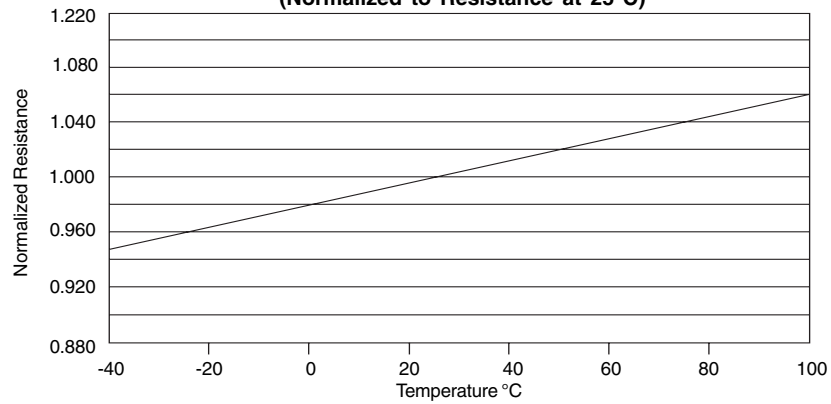
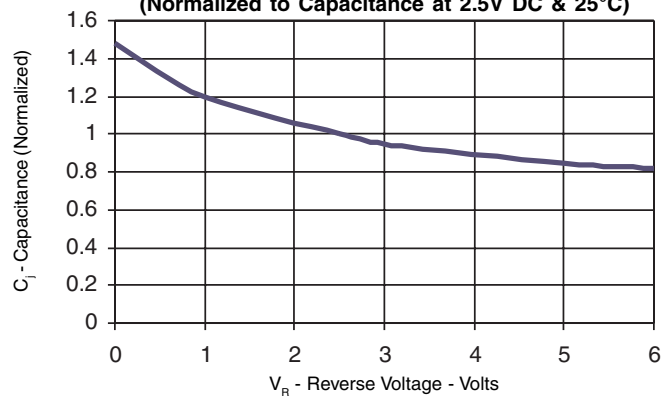
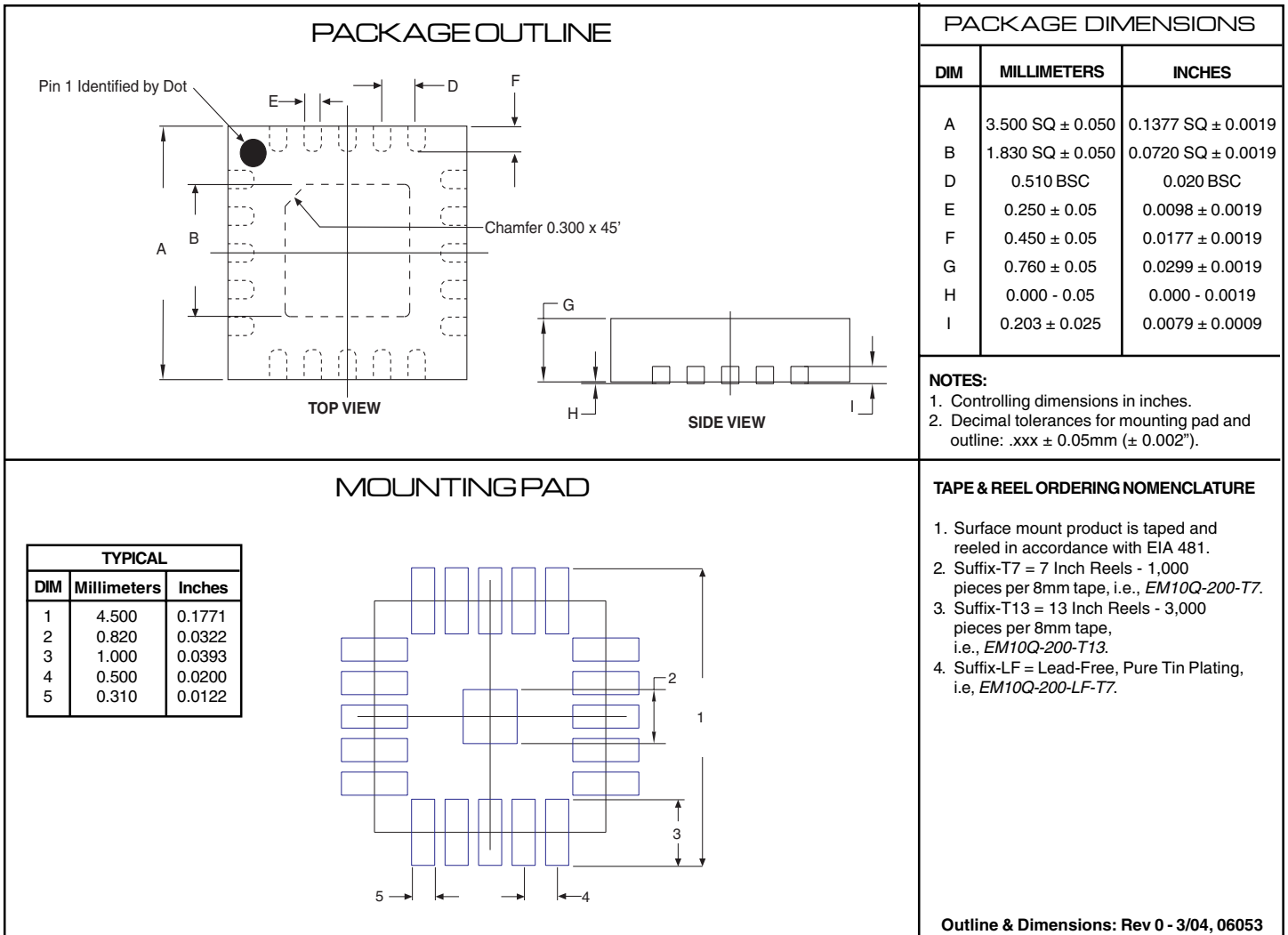


FIGURE 3
CAPACITANCE VS REVERSE VOLTAGE
(Normalized to Capacitance at 2.5V DC & 25°C)



PACKAGE OUTLINE & DIMENSIONS



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