

APPLICATIONS

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

IEC COMPATIBILITY (EN61000-4)

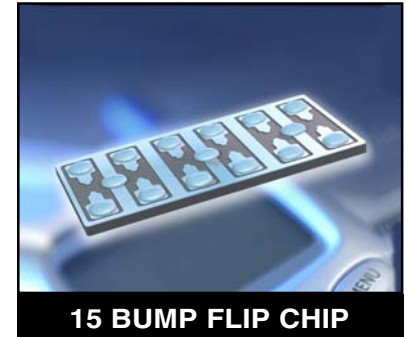
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns

FEATURES

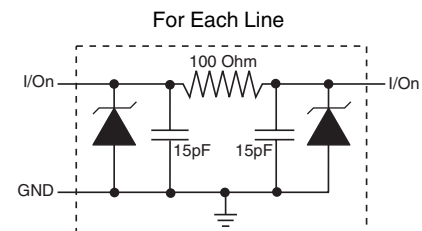
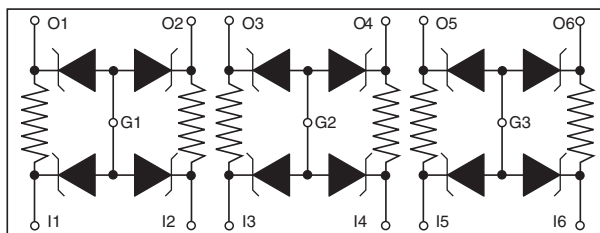
- ✓ ESD Protection > 25 kilovolts
- ✓ Bidirectional EMI Filtering/TVS Low Pass Filters
- ✓ Low Insertion Loss: -3db Roll-Off @ 90MHz
- ✓ Protects Up to Six(6) Data Lines
- ✓ RoHS Compliant

MECHANICAL CHARACTERISTICS

- ✓ 15 Bump Flip Chip Package
- ✓ Weight 0.73 milligrams (Approximate)
- ✓ Available in Lead-Free Plating
- ✓ Solder Reflow Temperature:
Lead-Free - Sn/Ag/Cu, 96/3.5/0.5: 260-270°C
- ✓ Consult Factory for Leaded Device Availability
- ✓ Flammability Rating UL 94V-0
- ✓ 8mm Tape and Reel Per EIA Standard 481



PIN CONFIGURATION



EMIF6-100LFC

DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

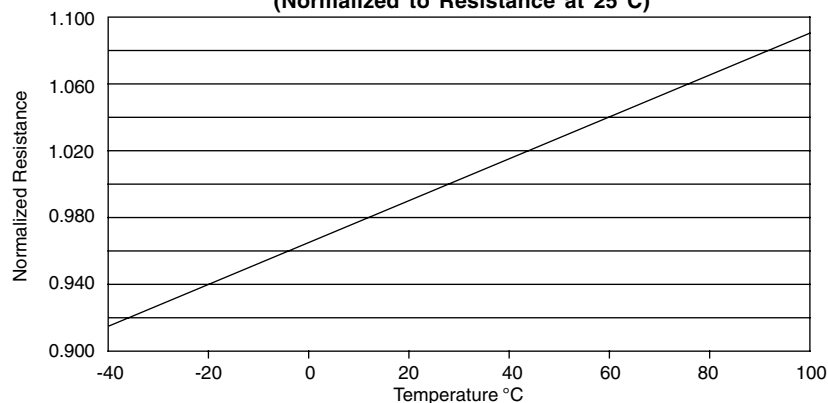
| PARAMETER | SYMBOL | VALUE | UNITS |
|----------------------------|-----------|------------|-------|
| Operating Temperature | T_A | -40 to 85 | °C |
| Storage Temperature | T_{STG} | -55 to 150 | °C |
| DC Power Per Resistor | P | 100 | mW |
| Typical Resistance @ ± 20% | R | 100 | OHMS |

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

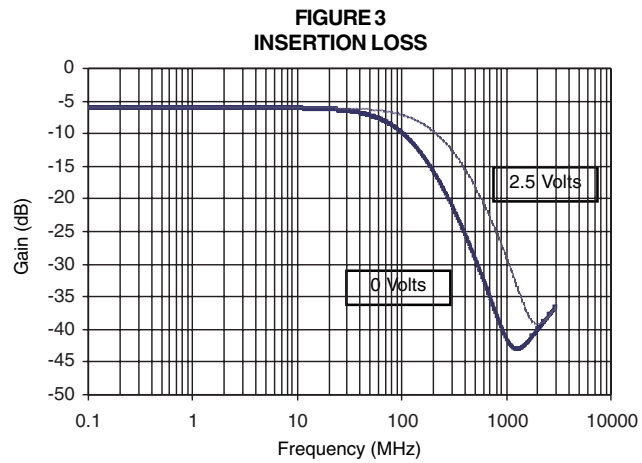
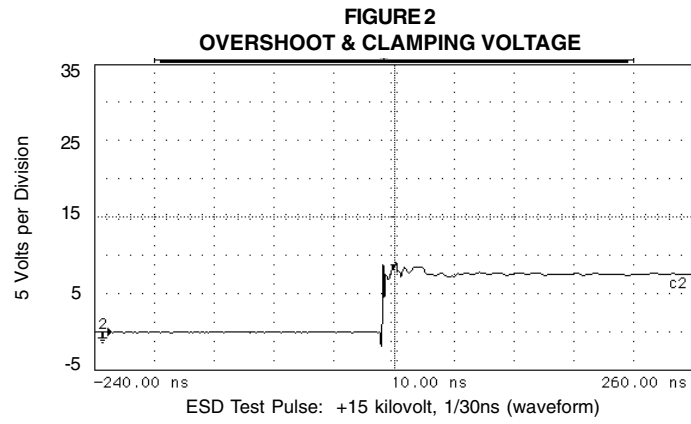
| PART NUMBER | RATED STAND-OFF VOLTAGE V_{WM} VOLTS | MINIMUM BREAKDOWN VOLTAGE @ 1mA $V_{(BR)}$ VOLTS | MAXIMUM REVERSE LEAKAGE CURRENT @ 3V I_b μA | TYPICAL FORWARD VOLTAGE @ 10mA V_F VOLTS | MINIMUM ATTENUATION @ 800-3000 MHz dB | CUT-OFF FREQUENCY (50 OHMS I/O) ZERO BIAS fC MHz | TYPICAL CAPACITANCE PERLINE (See Note 1) @ 2.5V, 1MHz C_{LINE} pF |
|--------------|--|---|---|---|--|--|--|
| EMIF6-100LFC | 5.0 | 6.0 | 0.1 | 0.8 | 30 | 90 | 30 |

Note 1: ± 20% tolerance.

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



GRAPHS

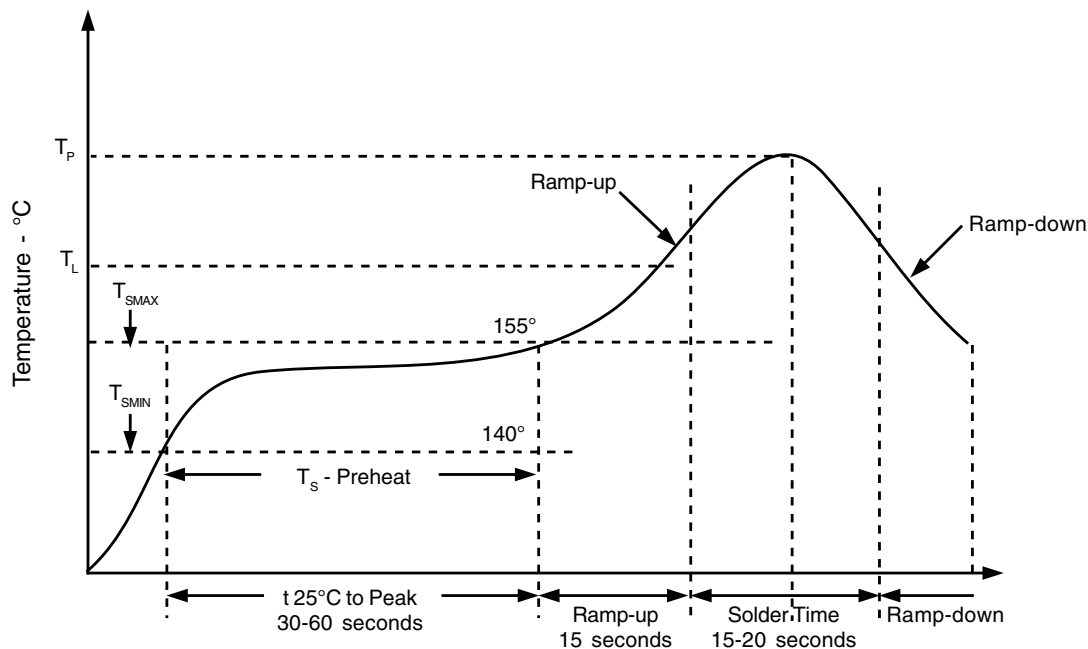
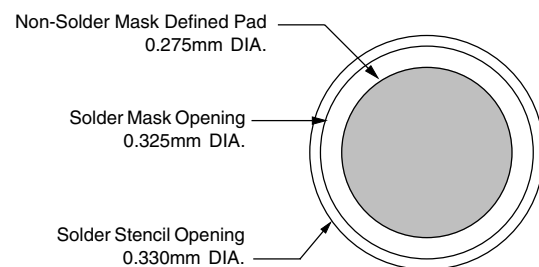


SOLDER RECOMMENDATIONS

| PRINTED CIRCUIT BOARD RECOMMENDATIONS | |
|---|------------------------------|
| PARAMETER | VALUE |
| Pad Size on PCB | 0.275mm |
| Pad Shape | Round |
| Pad Definition | Non-Solder Mask Defined Pads |
| Solder Mask Opening | 0.325mm Round |
| Solder Stencil Thickness | 0.150mm |
| Solder Stencil Aperture Opening (laser cut, 5% tapered walls) | 0.330mm Round |
| Solder Paste Type | No Clean |
| Pad Protective Finish | OSP(Entek Cu Plus 106A) |
| Tolerance - Edge To Corner Ball | ±50µm |
| Solder Ball Side Coplanarity | ±20µm |
| Maximum Dwell Time Above Liquidous (183°C) | 60 Seconds |
| Soldering Maximum Temperature | 270°C |

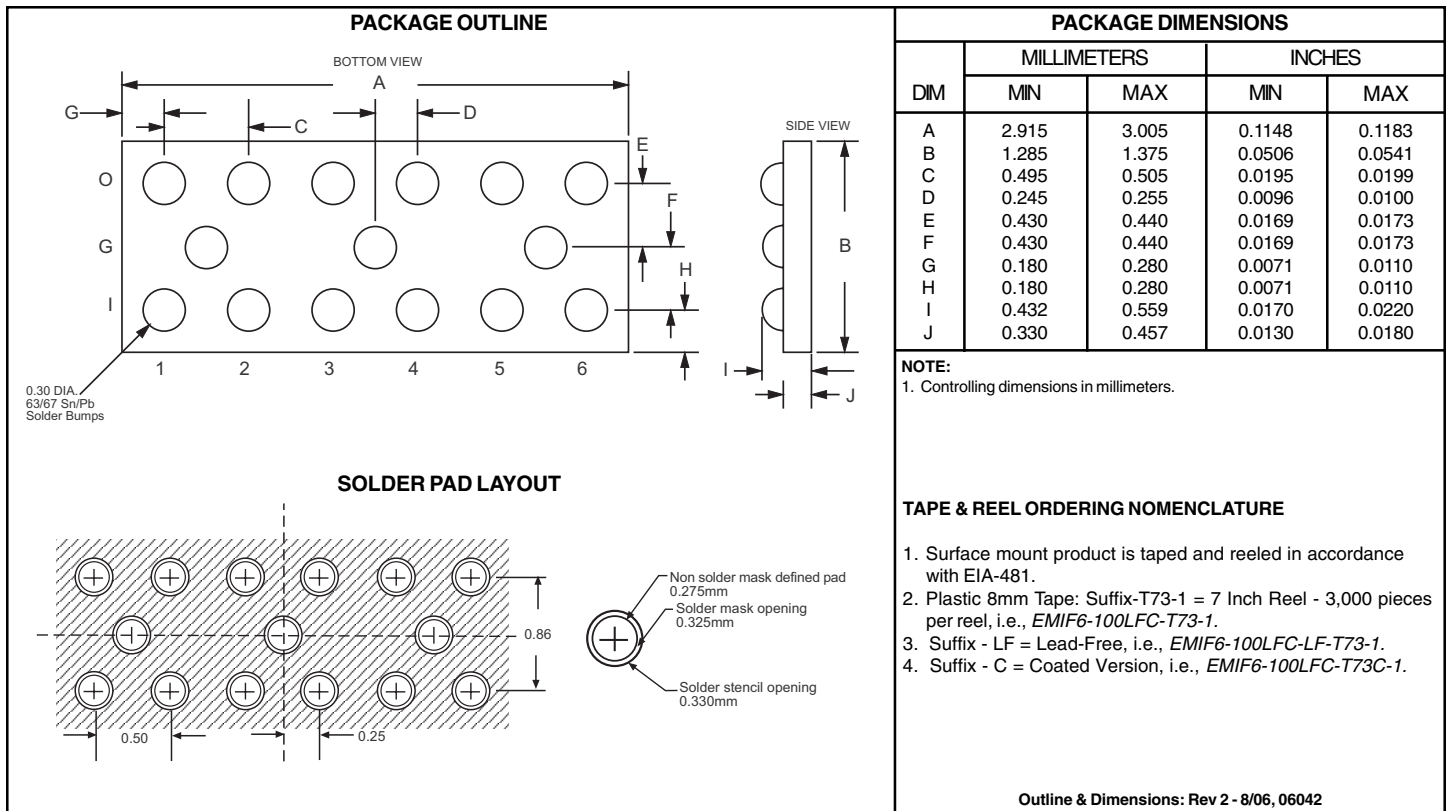
| REQUIREMENTS |
|--|
| <p>Temperature:</p> <p>T_p for Lead-Free (SnAgCu): 260-270°C</p> <p>T_p for Tin-Lead: 240-245°C</p> <p>Preheat time and temperature depends on solder paste and flux activation temperature, component size, weight, surface area & plating.</p> |

RECOMMENDED NON-SOLDER MASK DEFINED PAD ILLUSTRATION



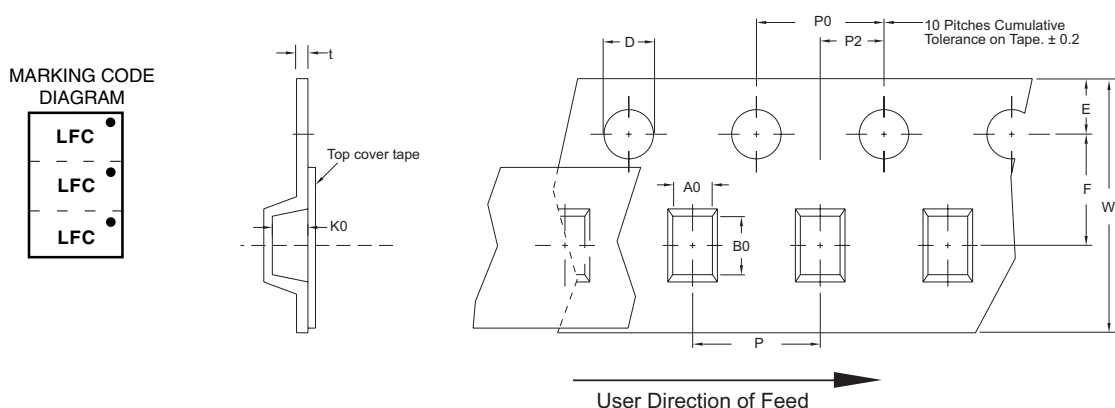
EMIF6-100LFC

15 BUMP FLIP CHIP PACKAGE OUTLINE & DIMENSIONS



Tape & Reel Specifications (Dimensions in millimeters)

| Reel Dia. | Tape Width | A0 | B0 | K0 | D | E | F | W | P0 | P2 | P | t |
|------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| 178mm (7") | 8mm | 1.78 ± 0.05 | 3.35 ± 0.05 | 0.76 ± 0.05 | 1.50 ± 0.10 | 1.75 ± 0.10 | 3.50 ± 0.05 | 8.00 ± 0.30 | 4.00 ± 0.10 | 2.00 ± 0.05 | 4.00 ± 0.10 | 0.20 ± 0.025 |



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