

EMI FILTER/TVS ARRAY

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

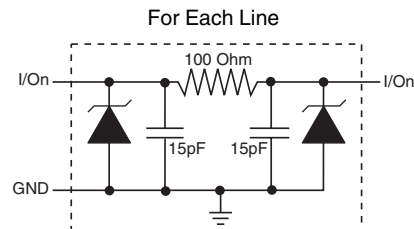
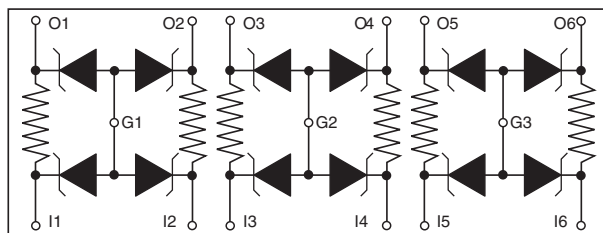
- ✓ ESD Protection > 25 kilovolts
- ✓ Bidirectional EMI Filtering/TVS Low Pass Filters
- ✓ Low Insertion Loss: -3db Roll-Off @ 90MHz
- ✓ Protects Up to Six(6) Data Lines
- ✓ RoHS Compliant

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



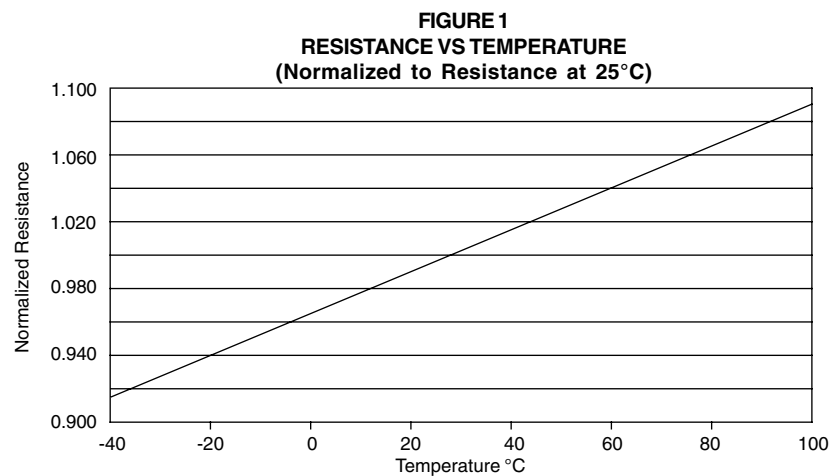
EMIF6-100LFC

DEVICE CHARACTERISTICS

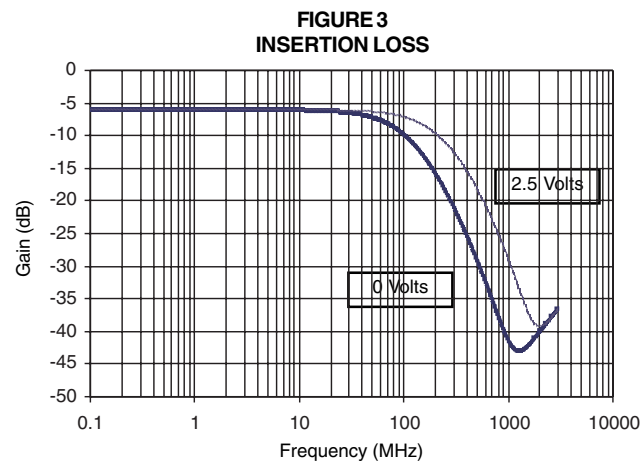
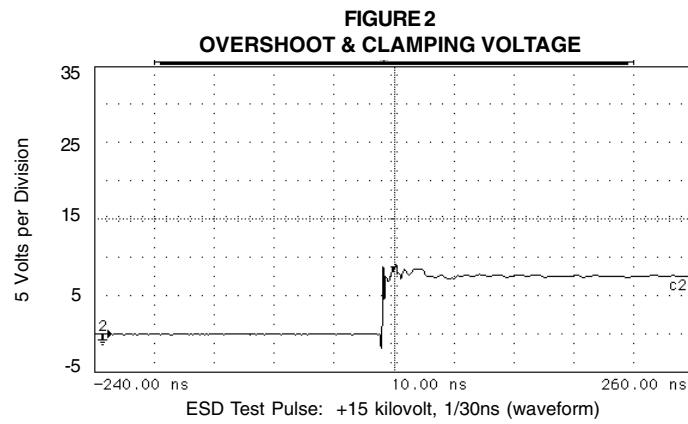
MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Operating Temperature	T_A	-40 to 85	°C
Storage Temperature	T_{STG}	-55 to 150	°C
DC Power Per Resistor	P	100	mW
Typical Resistance @ $\pm 20\%$	R	100	OHMS

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 PER LINE (See Note 1) @ 2.5V, 1MHz C_{LINE} pF
EMIF6-100LFC	5.0	6.0	0.1	0.8	30	90	30

Note 1: $\pm 20\%$ tolerance.



GRAPHS



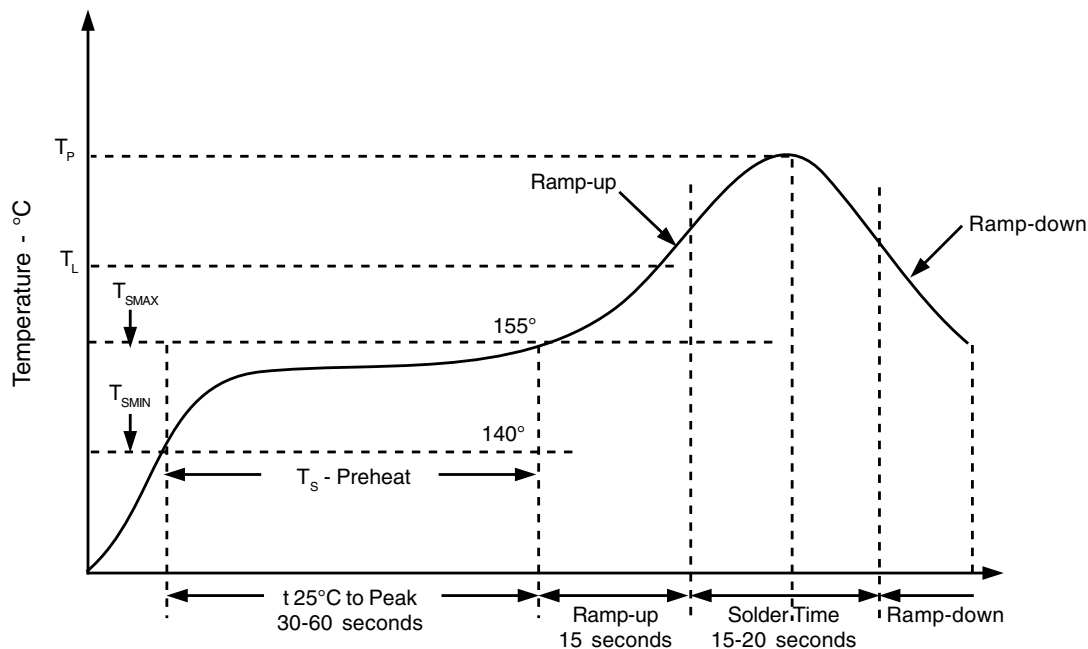
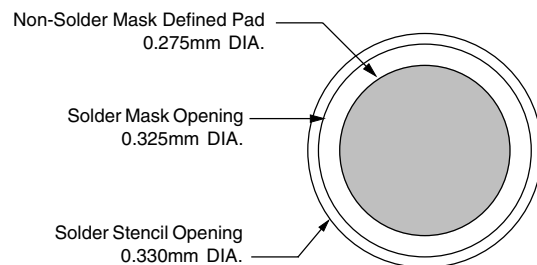
EMIF6-100LFC

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	$\pm 50\mu\text{m}$
Solder Ball Side Coplanarity	$\pm 20\mu\text{m}$
Maximum Dwell Time Above Liquidous (183°C)	60 Seconds
Soldering Maximum Temperature	270°C

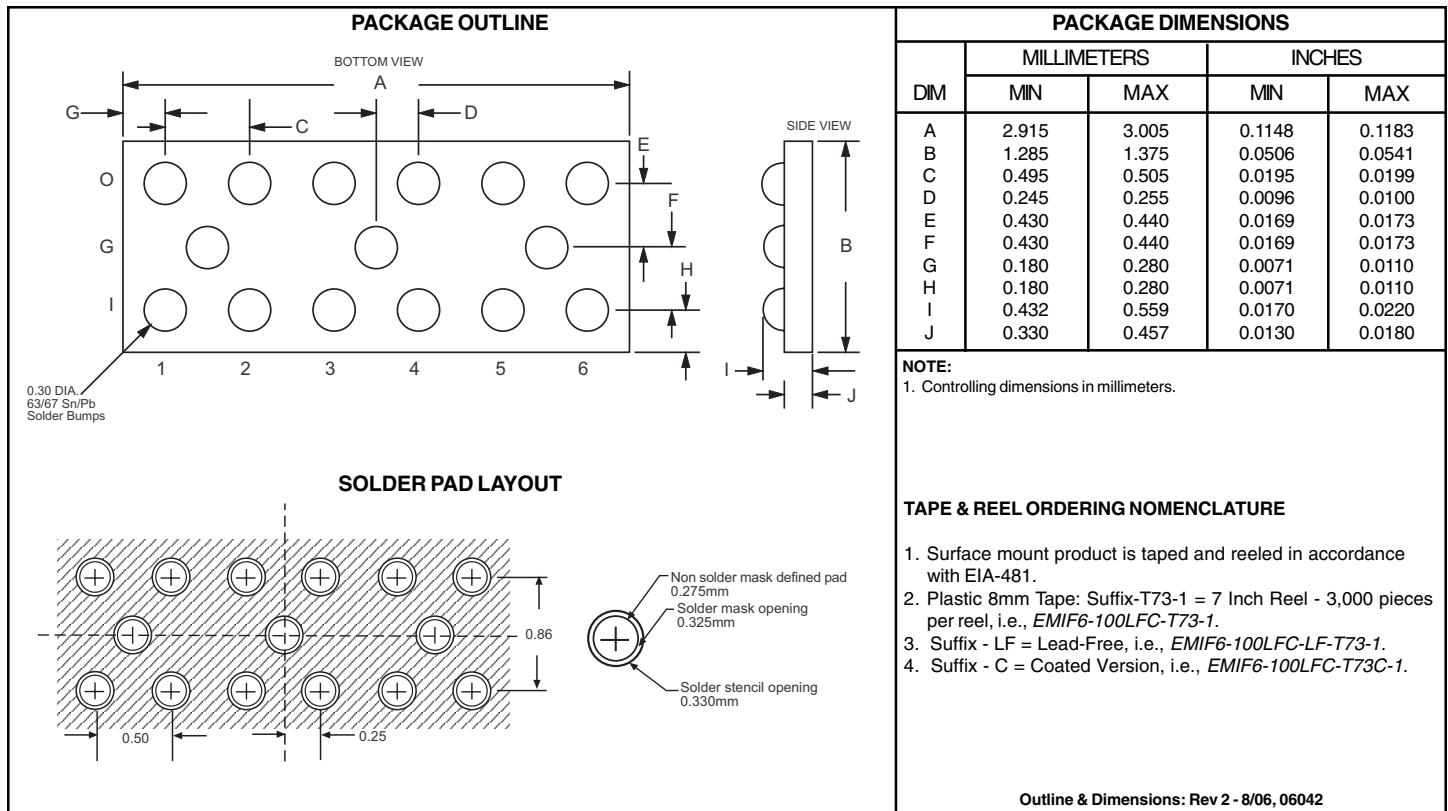
REQUIREMENTS
Temperature: T_p for Lead-Free (SnAgCu): $260-270^{\circ}\text{C}$ T_p for Tin-Lead: $240-245^{\circ}\text{C}$ Preheat time and temperature depends on solder paste and flux activation temperature, component size, weight, surface area & plating.

RECOMMENDED NON-SOLDER MASK DEFINED PAD ILLUSTRATION



EMIF6-100LFC

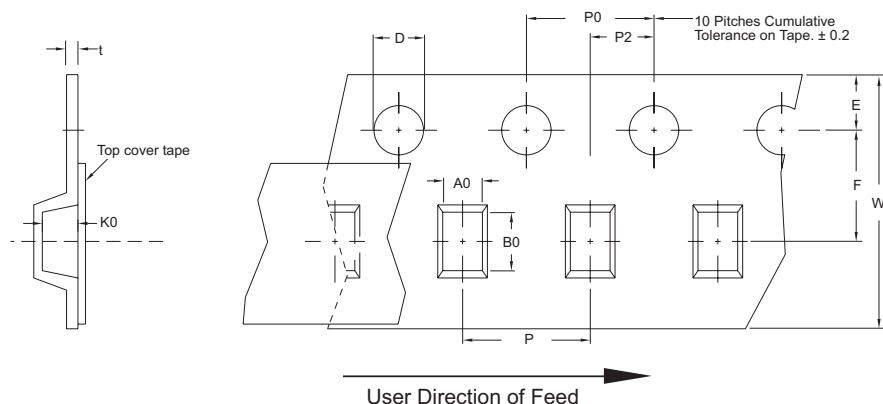
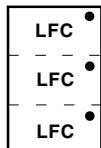
15 BUMP FLIP CHIP PACKAGE OUTLINE & DIMENSIONS



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

MARKING CODE DIAGRAM



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