

## APPLICATIONS

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

## IEC COMPATIBILITY (EN61000-4)

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

## FEATURES

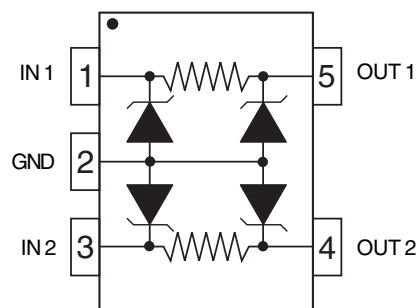
- ✓ ESD Protection > 25 kilovolts
- ✓ 18 Watts Peak Pulse Power per Line (tp = 8/20µs)
- ✓ Bidirectional EMI Filtering/TVS Low Pass Filters
- ✓ Low Insertion Loss: -3db Roll-Off @ 200MHz
- ✓ Protects Up to Two (2) Data Lines
- ✓ RoHS Compliant

## MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SC-70-5L
- ✓ Weight 7 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
- ✓ Marking: Marking Code & Pin One Defined By Dot on Top of Package



## PIN CONFIGURATION



# EMIF01-100

## DEVICE CHARACTERISTICS

### MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

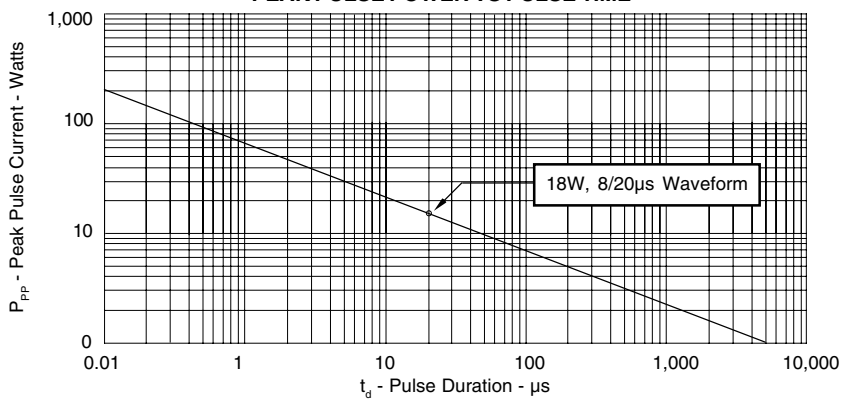
PARAMETER	SYMBOL	VALUE	UNITS
Operating Temperature	$T_A$	-55 to 150	°C
Storage Temperature	$T_{STG}$	-55 to 150	°C
Peak Pulse Power ( $t_p = 8/20\mu s$ ) - See Figure 1	$P_{PP}$	18	Watts
Typical Series Resistance per Line	R	100	OHMS

### ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

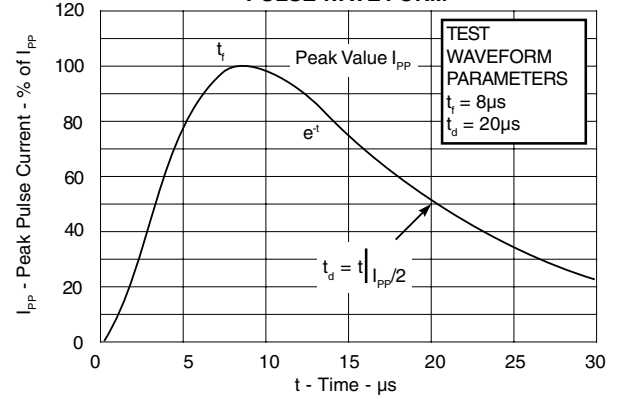
PART NUMBER	DEVICE MARKING	RATED STAND-OFF VOLTAGE $V_{WM}$ VOLTS	MINIMUM BREAKDOWN VOLTAGE @ 1mA $V_{(BR)}$ VOLTS	MAXIMUM REVERSE LEAKAGE CURRENT @ $V_{WM}$ $I_D$ $\mu A$	TYPICAL FORWARD VOLTAGE I@50mA 8/20 $\mu s$ $V_F$ VOLTS	CUT-OFF FREQUENCY MHz	MAXIMUM CAPACITANCE PER LINE (See Note 1) @0V, 1 MHz C pF
EMIF01-100	E10	3.0	6.0	0.5	1.0	220	26

**Note 1:** Cin between pins 1 & 2, 3 & 2, 4 & 2 and 5 & 2.

**FIGURE 1**  
PEAK PULSE POWER VS PULSE TIME

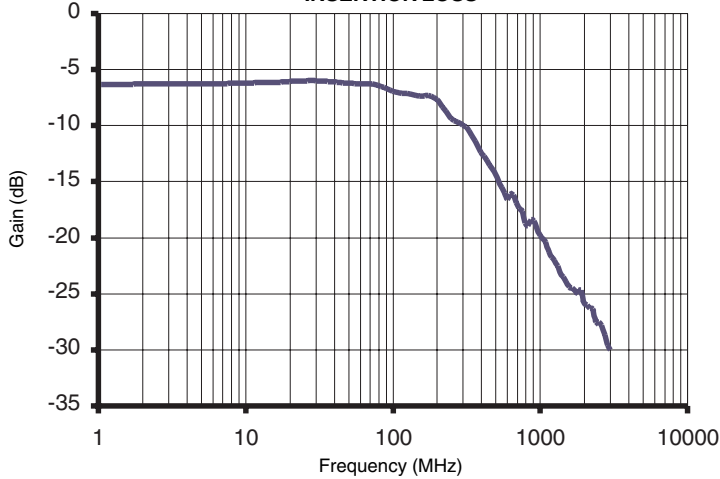


**FIGURE 2**  
PULSE WAVE FORM

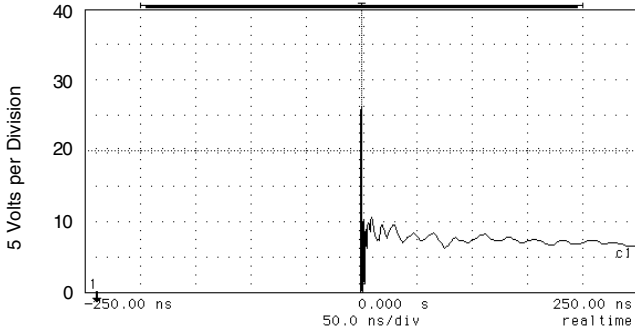


## GRAPHS

**FIGURE 3  
INSERTION LOSS**



**FIGURE 4  
OVERSHOOT & CLAMPING VOLTAGE**



ESD Test Pulse: 25 kilovolt, 1/30ns (waveform)

# EMIF01-100

## SC-70-5L PACKAGE OUTLINE & DIMENSIONS

### PACKAGE OUTLINE

### SC70-5L

### PACKAGE DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.90	2.15	0.074	0.084
B	1.15	1.35	0.045	0.055
C	0.80	1.00	0.031	0.040
D	0.15	0.30	0.006	0.012
E	0.65 BSC	-	0.0255 BSC	-
F	1.30 BSC	-	0.0512 BSC	-
G	0.80	1.10	0.031	0.043
J	0.08	0.25	0.003	0.010
K	1.90	2.15	0.074	0.084
L	0	0.10	0	0.004
M	0.26	0.46	0.010	0.018

### MOUNTING PAD

TYPICAL		
DIM	Millimeters	Inches
1	0.50	0.020
2	1.30	0.051
3	0.65	0.026
4	1.72	0.068
5	0.60	0.024
6	1.11	0.044
7	2.33	0.092

### NOTES

- Dimensioning and tolerances per ANSI Y14.5M, 1985.
- Controlling Dimension: Inches
- Dimensions are exclusive of mold flash and metal burrs.

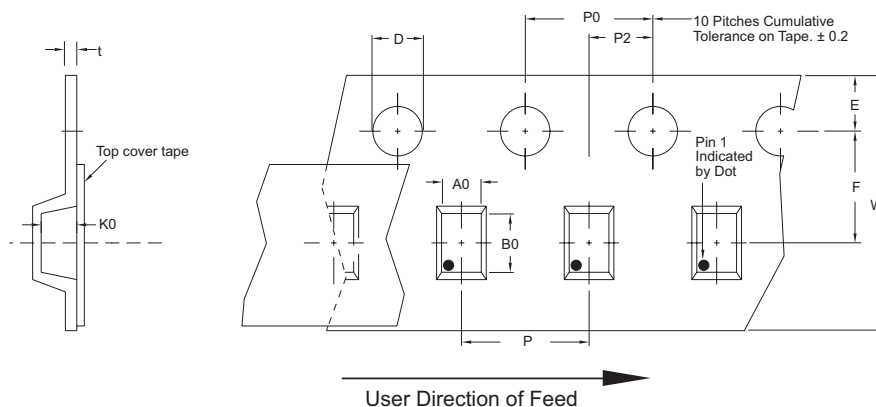
### TAPE & REEL ORDERING NOMENCLATURE

- Surface mount product is taped and reeled in accordance with EIA-481.
- Suffix-T7 = 7 Inch Reel - 3,000 pieces per 8mm tape, i.e., EMIF01-100-T7.
- Suffix-LF = Lead-Free, Pure-Tin Plating, i.e., EMIF01-100-LF-T7..

Outline & Dimensions: Rev 2 - 10/05, 06005

### Tape & Reel Specifications (Dimensions in millimeters)

Reel Dia.	Tape Width	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm (7")	8mm	2.25 ± 0.10	2.34 ± 0.10	1.22 ± 0.10	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	0.25



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