

## 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
- ✓ > 25db Attenuation from 800MHz to 3GHz
- ✓ Protects up to Four(4) Data Lines
- ✓ RoHS Compliant

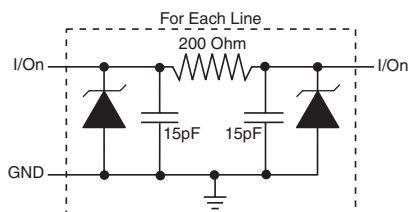
## MECHANICAL CHARACTERISTICS

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

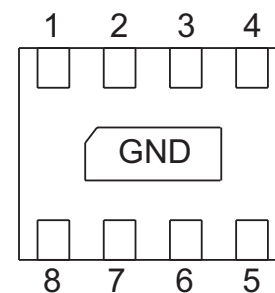


DFN-8SLP

## PIN CONFIGURATION



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



BOTTOM VIEW

# EM1636-04DSLP

## DEVICE CHARACTERISTICS

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

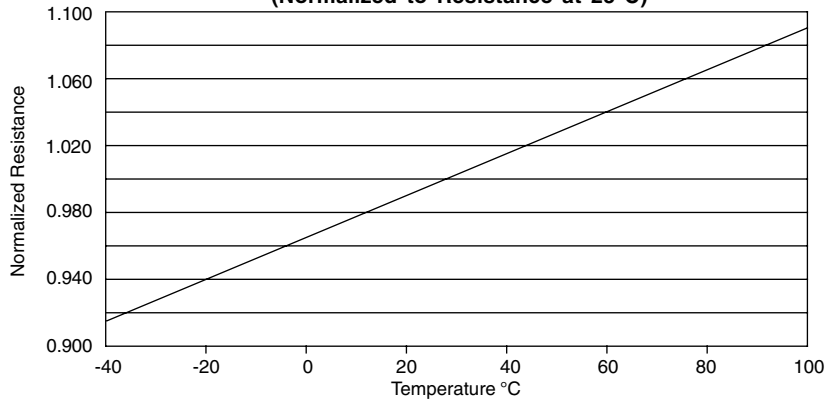
PARAMETER	SYMBOL	VALUE	UNITS
Operating Temperature	$T_A$	-40 to 85	°C
Storage Temperature	$T_{STG}$	-55 to 150	°C
DC Power Per Resistor	P	100	mW
Typical Resistance @ $\pm 20\%$	R	200	OHMS
Soldering Temperature for 10 seconds	$T_L$	265	°C

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

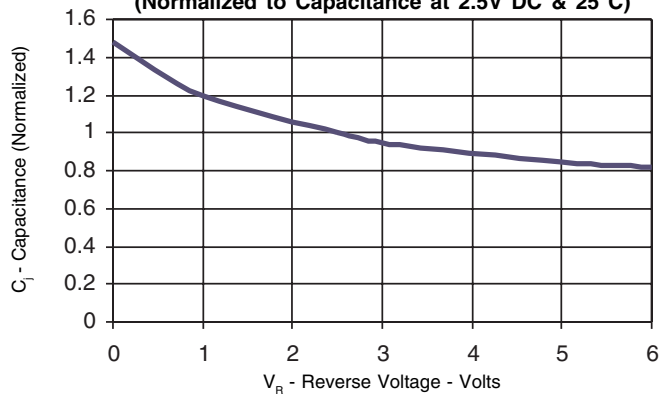
PART NUMBER	DEVICE MARKING CODE	RATED STAND-OFF VOLTAGE $V_{WM}$ VOLTS	MINIMUM BREAKDOWN VOLTAGE @ 1mA $V_{(BR)}$ VOLTS	MAXIMUM REVERSE LEAKAGE CURRENT @ 3V $I_b$ $\mu A$	TYPICAL FORWARD VOLTAGE @ 10mA $V_F$ VOLTS	MINIMUM ATTENUATION @ 800-3000 MHz dB	CUT-OFF FREQUENCY (50 OHMS I/O) ZERO BIAS fC MHz	TYPICAL CAPACITANCE @ 2.5V, 1MHz C pF
EM1636-04DSLP	4S6	5.0	6.0	0.1	0.8	25	100	30

## GRAPHS

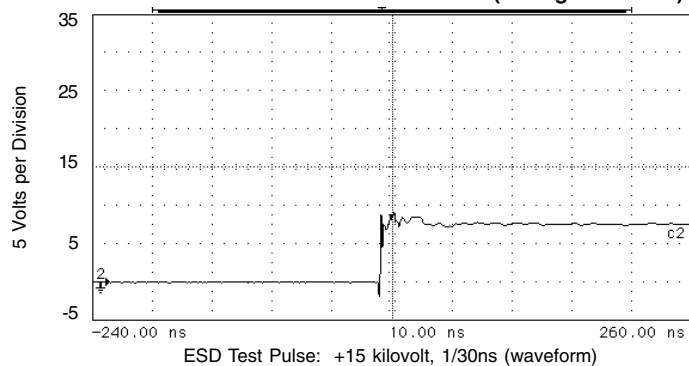
**FIGURE 1**  
**RESISTANCE VS TEMPERATURE**  
**(Normalized to Resistance at 25°C)**



**FIGURE 2**  
**CAPACITANCE VS REVERSE VOLTAGE**  
**(Normalized to Capacitance at 2.5V DC & 25°C)**



**FIGURE 3**  
**OVERSHOOT & CLAMPING VOLTAGE (through the filter)**



# EM1636-04DSLP

## DFN-8SLP PACKAGE OUTLINE & DIMENSIONS

### PACKAGE OUTLINE

**TOP VIEW**: Shows dimensions P1 (pitch) and P2 (width).

**END VIEW**: Shows the profile of the package.

**SIDE VIEW**: Shows dimensions L1, L2, L3, p, and P3.

**BOTTOM VIEW**: Shows dimensions L1, L2, L3, p, G1, and G2.

### PACKAGE DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
P1	1.65	1.75	0.065	0.069
P2	1.30	1.40	0.051	0.055
P3	0.50	0.60	0.020	0.024
L1	0.21	0.28	0.008	0.011
L2	0.23	0.30	0.009	0.012
L3	0.13	0.18	0.005	0.007
p	0.35	0.45	0.014	0.018
G1	0.85	0.95	0.033	0.037
G2	0.35	0.45	0.014	0.018

**NOTES:**

- Controlling dimensions in millimeters
- Dimension b applies to terminal and is measured between 0.25 and 0.30mm from terminal.
- Coplanarity applies to the exposed pad as well as the terminals.

**TAPE & REEL ORDERING NOMENCLATURE**

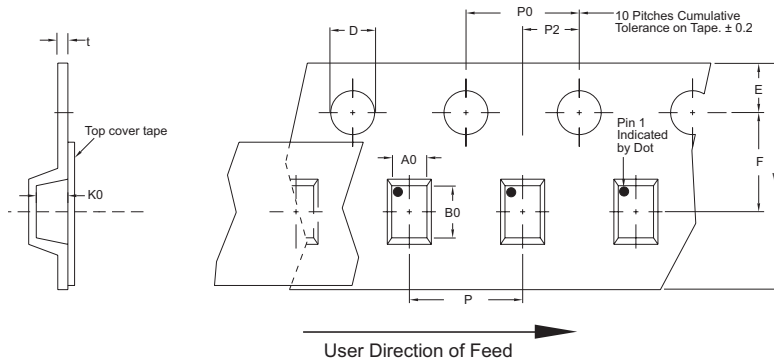
- Surface mount product is taped and reeled in accordance with EIA 481.
- Suffix-T71 = 7 Inch Reel - 1,000 pieces per 8mm tape, i.e., EM1636-04DSLP-T71.
- Suffix-T73 = 7 Inch Reel - 3,000 pieces per 8mm tape, i.e., EM1636-04DSLP-T73.
- Suffix - LF = Lead-Free, Pure Tin Plating, i.e., EM1636-04DSLP-LF-T73.

**Outline & Dimensions: Rev 0 - 4/06, 06069**

### MOUNTING PAD

Tape & Reel Specifications (Dimensions in millimeters)

Reel Dia.	Tape Width	A0	B0	K0	D	E	F	W	P0	P2	P	t
178mm (7")/330mm (13")	8mm	1.70±0.10	1.9±0.10	0.80±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±0.05



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