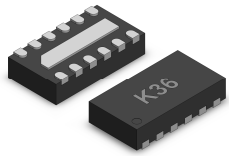
6-Channel EMI Filter with Integrated ESD Protection

EM2376K

Description

The EM2376K is a four-channel (C-R-C) Pi-style EMI filter array with integrated ESD protection. Its typical component values of R=100Ω and C=8.5pF deliver a cutoff frequency. This performance makes the part ideal for parallel interfaces with data rates up to 70 Mbps in applications where wireless interference must be minimized. The specified attenuation range is very effective in minimizing interference from 2G/3G, GPS, Bluetooth® and WLAN signals. The EM2376K is available in the low-profile 12-lead 2.50mm x 1.35mm LWSON-12 surface mount package.

LWSON-12



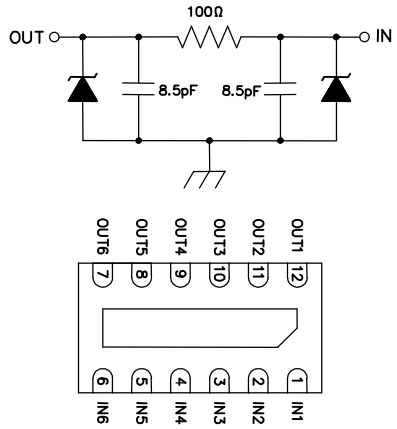
Feature

- Filter performance: 30dB minimum attenuation 1.8GHz to 2.5GHz
- Bidirectional EMI/RFI filter with integrated TVS for ESD protection
- TVS working voltage: 5V
- Resistor: 100Ω±20%
- Typical Capacitance: 20pF (VR = 0V)
- Protection and filtering for four lines
- Solid-state technology
- RoHS Compliant
- IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)

Applications

- EMI Filtering for LCD and Camera Data Lines
- EMI Filtering and Protection for I/O Ports and Keypads

Functional Diagram



Mechanical Characteristics

- Nominal Dimensions: 2.50 x 1.35 x 0.50 mm
- Molding Compound Flammability Rating : UL 94V-0
- Quantity Per Reel : 3,000pcs
- Reel Size : 7 inch
- Lead Finish : Lead Free

Mechanical Characteristics (@ 25℃ Unless Otherwise Specified)

Symbol	Parameter	Value	Units
T_L	**Lead Soldering Temperature**	260 (10sec)	ºC
T_J	**Junction Temperature**	125	ºC
T_{STG}	**Storage Temperature Range**	-55 to +150	ºC
T_{OP}	**Operating Temperature Range**	-55 to +85	ºC
	IEC61000-4-2 (ESD) **Air Discharge**	±15	KV
	Contact Discharge	±8	
	IEC61000-4-4 (EFT)	40	A

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Electrical Characteristics (@ 25℃ Unless Otherwise Specified)

Part Number	Device Marking	V_{RWM} (V) (Max.)	V_B (V) (Min.)	I_R (μA) (Max.)	R (Ω) (Typ.)	F_C (MHz) (Typ.)	Attenuation (dB) (Min.)	C_T @0V (pF) (Typ.)	C_T @2.5V (pF) (Typ.)
EM2376K	K36	5	6.0	0.5	100	200	25	20	11

Characteristic Curves

Fig1. ESD Pulse Waveform (according to IEC 61000-4-2)

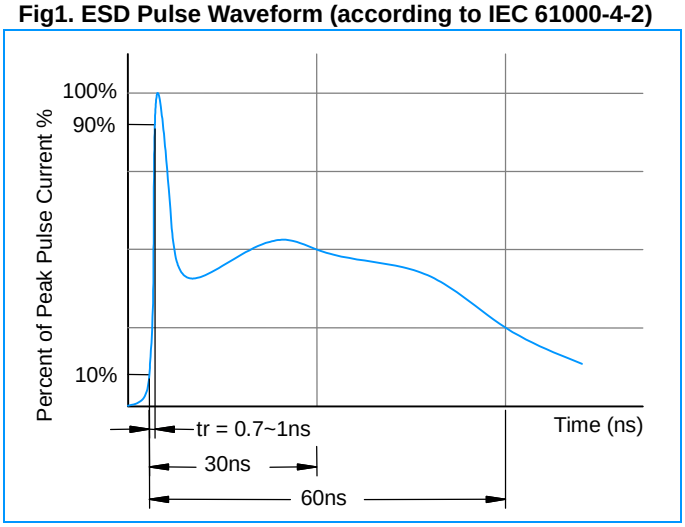


Fig2. Power Derating Curve

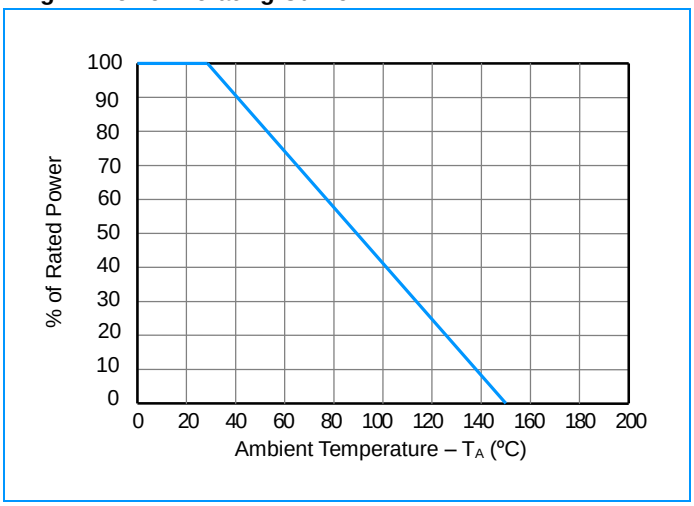


Fig3. Analog Crosstalk (Each Line)

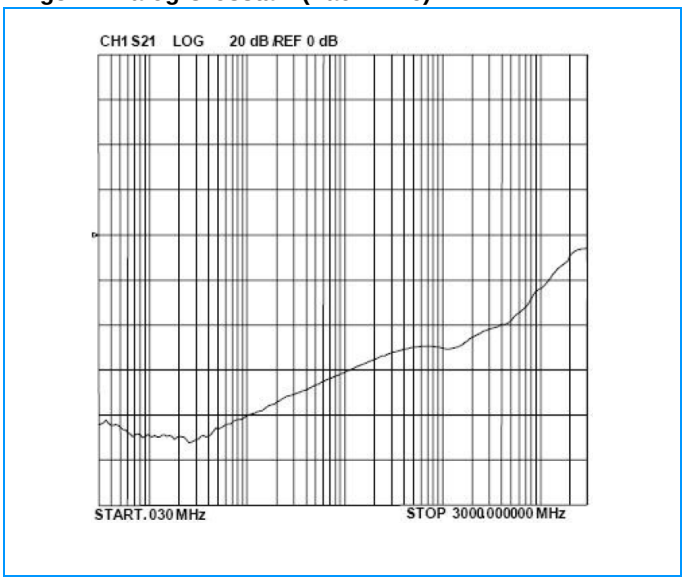
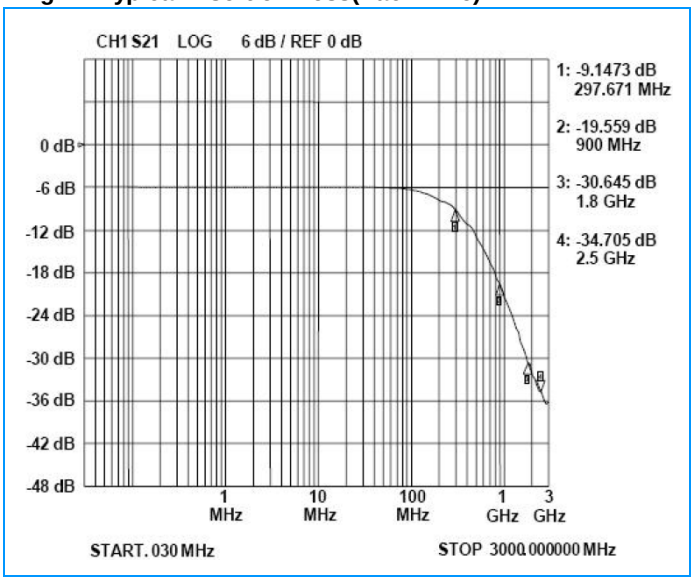


Fig4. Typical Insertion Loss(Each Line)

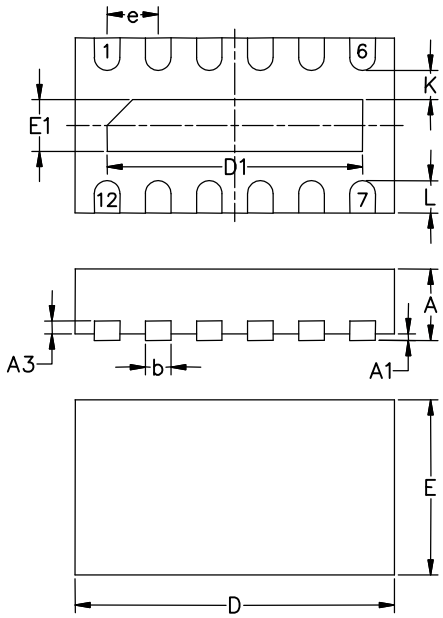


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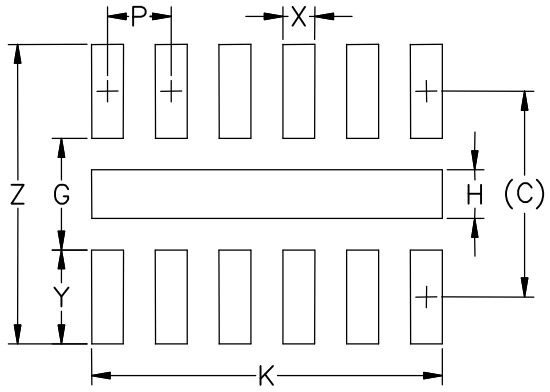
EM2376K

LWSON-12 Package Outline & Dimensions



Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.450/0.550	0.550/0.650	0.018/0.022	0.022/0.026
A1	0.000	0.050	0.000	0.002
A3	0.150REF		0.006REF	
D	2.400	2.600	0.094	0.102
E	1.250	1.450	0.049	0.057
D1	1.900	2.100	0.075	0.083
E1	0.300	0.500	0.012	0.020
K	0.200 MIN		0.008 MIN	
b	0.150	0.250	0.006	0.010
e	0.400 TYP.		0.016 TYP.	
L	0.150	0.350	0.006	0.014

Soldering Footprint



Symbol	Millimeters	Inches
C	(1.27)	(0.050)
G	0.69	0.027
H	0.30	0.012
K	2.20	0.087
P	0.40	0.016
X	0.20	0.008
Y	0.58	0.023
Z	1.85	0.073

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