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CM6407

EMI Filters with ESD Protection for Data Line Applications

Product Description

The CM6407 is an 18-bump EMI filter with ESD protection device for data line application in a 0.4 mm pitch, 5 x 4 CSP form factor. It is fully compliant with IEC 61000-4-2 Level 4. The CM6407 is RoHS II compliant.

Features

- 18-Bump, 1.96 mm X 1.56 mm Footprint Chip Scale Package
- These Devices are Pb-Free and are RoHS Compliant



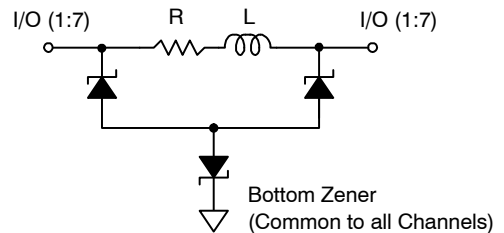
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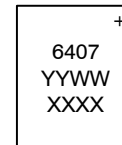


**WLCSP18
CASE 567CG**

ELECTRICAL SCHEMATIC



MARKING DIAGRAM



6407 = CM6407
YYWW = Date Code
XXXX = Last four digits of lot#

ORDERING INFORMATION

Device	Package	Shipping†
CM6407	CSP-18 (Pb-Free)	5000/Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, BRD8011/D.

CM6407

PACKAGE / PINOUT DIAGRAMS

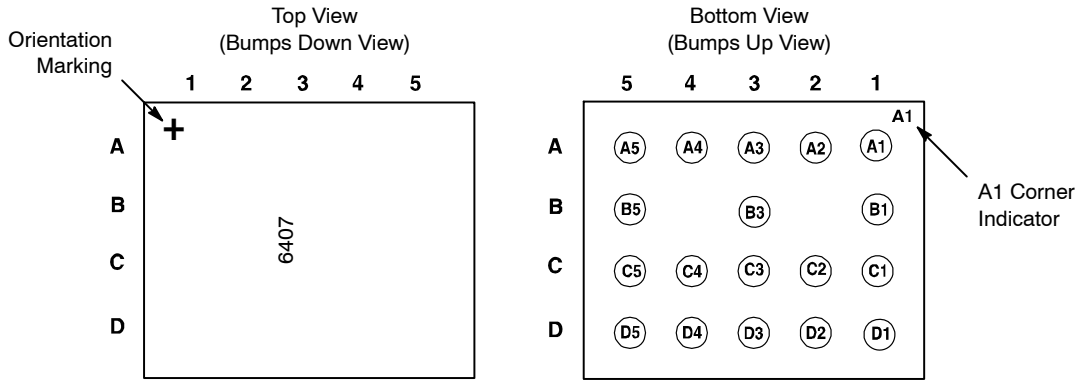


Table 1. PIN DESCRIPTIONS

A5 = Line 1	A4 = Line 2	A3 = GND	A2 = Line 1	A1 = Line 2
B5 = Line 3		B3 = GND		B1 = Line 3
C5 = Line 4	C4 = Line 5	C3 = GND	C2 = Line 4	C1 = Line 5
D5 = Line 6	D4 = Line 7	D3 = GND	D2 = Line 6	D1 = Line 7

ELECTRICAL SPECIFICATIONS AND CONDITIONS

Table 2. PARAMETERS AND OPERATING CONDITIONS

Parameter	Rating	Units
Storage Temperature Range	-55 to +150	°C
Operating Temperature Range	-40 to +85	°C
Power Dissipation at 70°C per Channel	60	mW

Table 3. ELECTRICAL OPERATING CHARACTERISTICS (Note 1)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
R	Resistance		100	125	150	Ω
L	Inductance	(Note 2)		35		nH
C	Capacitance per Channel	At 1 MHz, $V_{IN} = 0$ V	19	24	29	pF
		At 1 MHz, $V_{IN} = 2.5$ V		15		pF
Att(5)	Passband Attenuation at 5 MHz			-7		dB
F_C	Cut-off Frequency	$Z_{SOURCE} = 50 \Omega$, $Z_{LOAD} = 50 \Omega$		250		MHz
V_{BR}	Breakdown Voltage	$I_R = \pm 1$ mA	±6	±7.8	±10	V
I_{LEAK}	Leakage Current per Channel	$V_{IN} = 3.0$ V		10	100	nA
V_{ESD}	ESD Peak Discharge Voltage Protection at All Pins: a) Contact Discharge per IEC 61000-4-2 standard b) Air Discharge per IEC 61000-4-2 standard	(Note 2)	±15 ±15			kV

1. All parameters specified at $T_A = 25^\circ\text{C}$ unless otherwise noted.
2. Standard IEC 61000-4-2 ($C_{Discharge} = 150$ pF, $R_{Discharge} = 330 \Omega$).

CM6407

RF CHARACTERISTICS

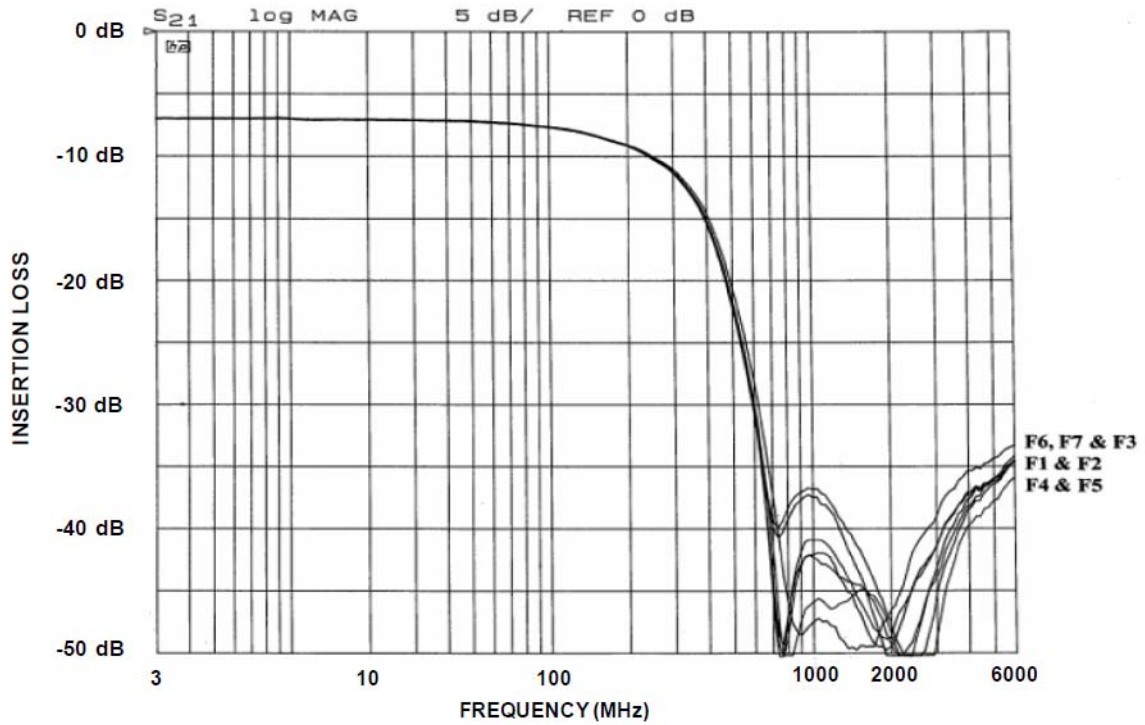
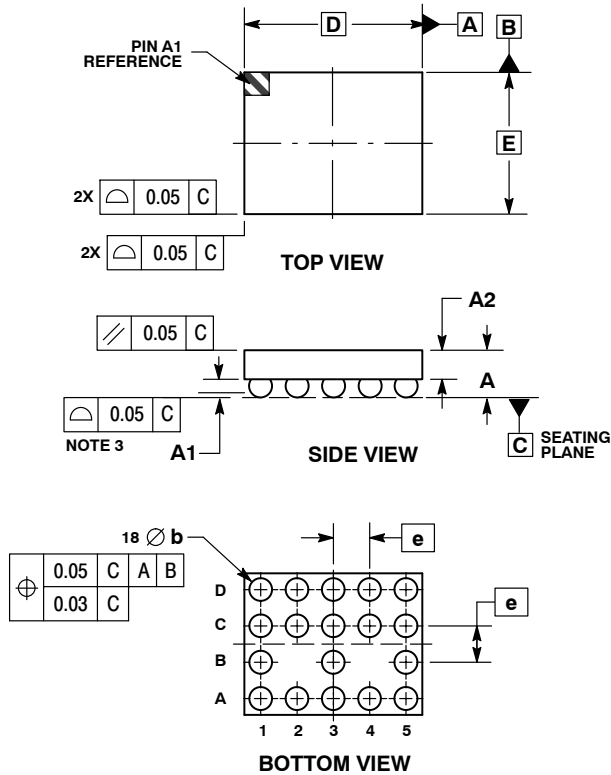


Figure 1. Typical Insertion Loss (Bias = 0 V, T_A = 25°C, 50 Ω Environment)

CM6407

PACKAGE DIMENSIONS

WLCSP18, 1.96x1.56
CASE 567CG-01
ISSUE O

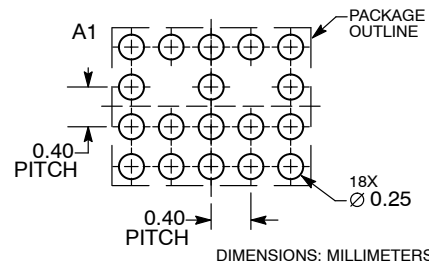


NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. COPLANARITY APPLIES TO SPHERICAL CROWNS OF SOLDER BALLS.

DIM	MILLIMETERS	
	MIN	MAX
A	0.57	0.63
A1	0.17	0.24
A2	0.41	REF
b	0.24	0.29
D	1.96	BSC
E	1.56	BSC
e	0.40	BSC

RECOMMENDED SOLDERING FOOTPRINT*



*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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