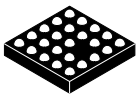
CM6320

EMI Filter with ESD Protection for SIM Card Applications

ON Semiconductor®

http://onsemi.com



WLCSP24
CASE 567CK

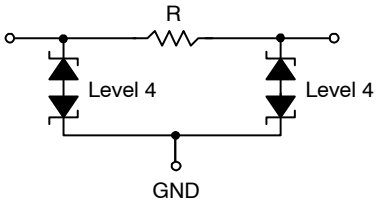
Product Description

The CM6320 is a 24−bump EMI filter with ESD protection device for data line application in a 0.4 mm pitch, 5 x 5 CSP form factor. It is fully compliant with IEC 61000−4−2. The CM6320 is RoHS II compliant.

Features

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

ELECTRICAL SCHEMATIC



1 of 10 Filter Channels

MARKING DIAGRAM

6320	= CM6320
YYWW	= Date Code
XXXX	= Last four digits of lot #

ORDERING INFORMATION

Device	Package	Shipping†
CM6320	CSP−24 (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.

PACKAGE / PINOUT DIAGRAMS

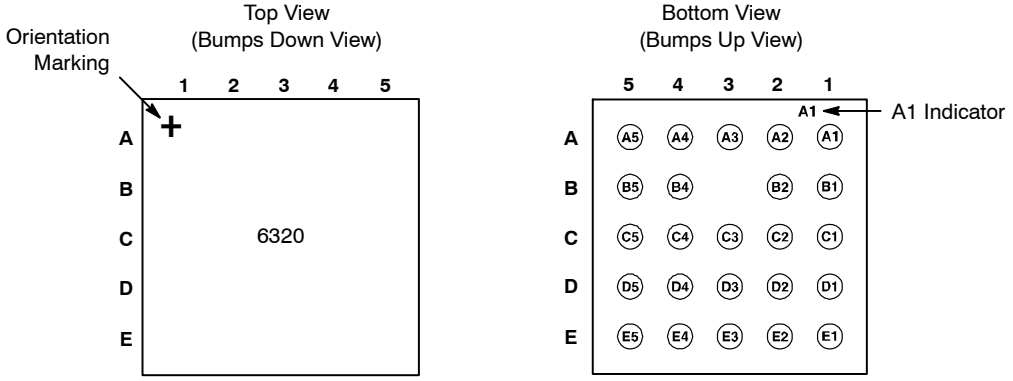


Table 1. PIN DESCRIPTIONS

A5 = Line 1	A4 = Line 2	A3 = GND	A2 = Line 1	A1 = Line 2
B5 = Line 3	B4 = Line 4		B2 = Line 3	B1 = Line 4
C5 = Line 5	C4 = Line 6	C3 = GND	C2 = Line 5	C1 = Line 6
D5 = Line 7	D4 = Line 8	D3 = GND	D2 = Line 7	D1 = Line 8
E5 = Line 9	E4 = Line 10	E3 = GND	E2 = Line 9	E1 = Line 10

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		56	70	84	Ω
C	Capacitance per Line	At 1 MHz, V_{IN} = 0 V; (Note 2)			30	pF
V_{BR}	Breakdown Voltage	I_R = ±1 mA	±6	±7.8	±10	V
I_{LEAK}	Leakage Current per Channel	V_{IN} = 3.0 V		10	100	nA
V_{ESD}	ESD Protection Peak Discharge Voltage a) Contact Discharge per IEC 61000−4−2 standard b) Air Discharge per IEC 61000−4−2 standard	(Notes 2 and 3)	 ±15 ±15			kV

1. All parameters specified at T_A = 25°C unless otherwise noted.
2. These parameters guaranteed by design and characterization.
3. Standard IEC 61000−4−2 with $C_{Discharge}$ = 150 pF, $R_{Discharge}$ = 330 Ω.

RF CHARACTERISTICS

T_A = 25°C, DC Bias = 0 V, 50 Ω Environment

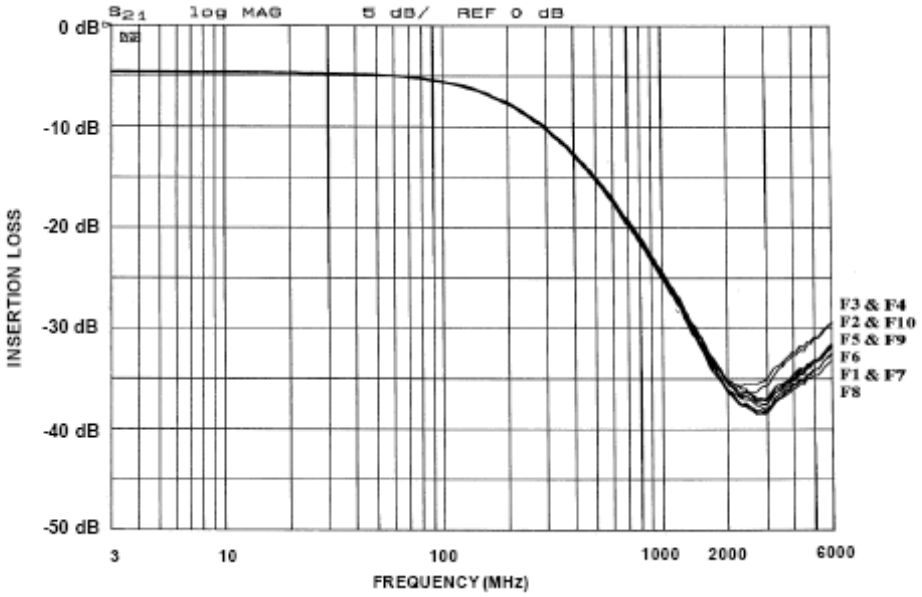
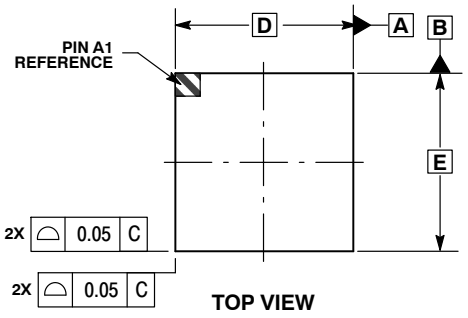


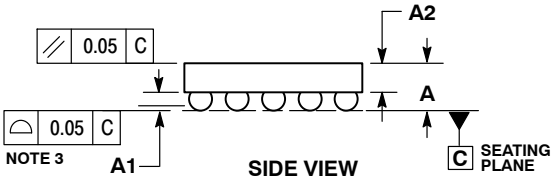
Figure 1. Insertion Loss (0 V Bias)

PACKAGE DIMENSIONS

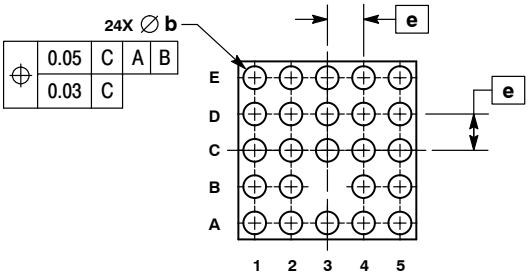
WLCSP24, 1.96x1.96
CASE 567CK−01
ISSUE O



TOP VIEW



SIDE VIEW

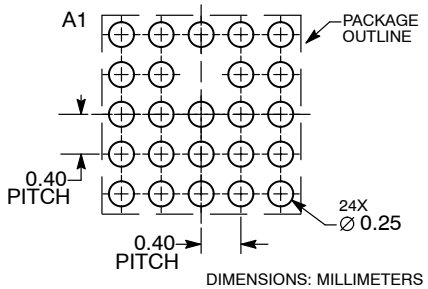


BOTTOM VIEW

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

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

RECOMMENDED SOLDERING FOOTPRINT*



DIMENSIONS: MILLIMETERS

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

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
Literature Distribution Center for ON Semiconductor
P.O. Box 5163, Denver, Colorado 80217 USA
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