

CM1405

LCD EMI Filter Array with ESD Protection

ON Semiconductor's CM1405 is an EMI filter array with ESD protection, which integrates eight Pi-filters (C-R-C). The CM1405 has component values of 25 pF – 100 Ω – 25 pF. The parts include avalanche-type ESD diodes on every pin, which provide a very high level of protection for sensitive electronic components that may be subjected to electrostatic discharge (ESD). The ESD diodes connected to the filter ports safely dissipate ESD strikes of ±30 kV, exceeding the maximum requirement of the IEC61000-4-2 international standard. Using the MIL-STD-883 (Method 3015) specification for Human Body Model (HBM) ESD, the pins are protected for contact discharges at greater than ±30 kV.

This device is particularly well-suited for portable electronics (e.g. mobile handsets, PDAs, notebook computers) because of its small package and easy-to-use pin assignments. In particular, the CM1405 is ideal for EMI filtering and protecting data lines from ESD for the LCD display in mobile handsets.

The CM1405-03 incorporates *OptiGuard*[™] coating which results in improved reliability at assembly and is available in a space-saving, low-profile Chip Scale Package with RoHS compliant lead-free finishing.

- Eight Channels of EMI Filtering
- ±30 kV ESD Protection on Each Channel (IEC 61000-4-2 Level 4, Contact Discharge)
- ±30 kV ESD Protection on Each Channel (HBM)
- Better than 35 dB of Attenuation at 800-2700 MHz
- Chip Scale Package Features Extremely Low Lead Inductance for Optimum Filter and ESD Performance
- 20-Bump, 4.000 mm x 1.458 mm Footprint Chip Scale Package
- *OptiGuard*[™] Coated Version Available for Improved Reliability at Assembly 3500/Tape & Reel
- These Devices are Pb

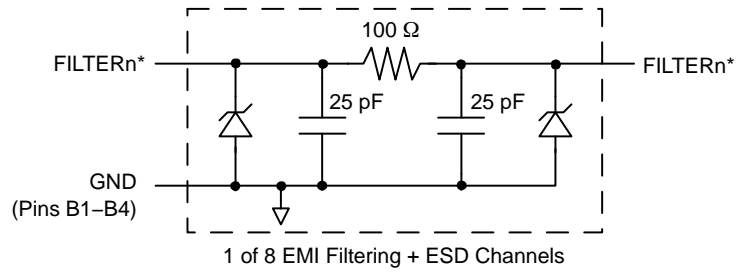


N053

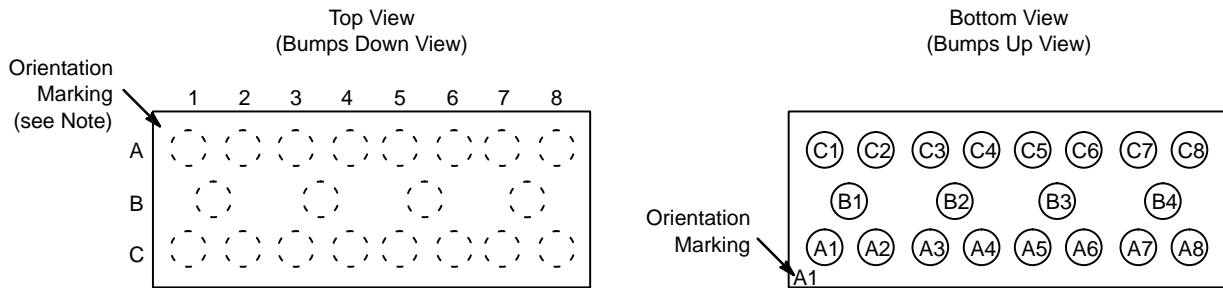
CM1405-01
20-Bump CSP Package

CM1405-03
20-Bump CSP Package

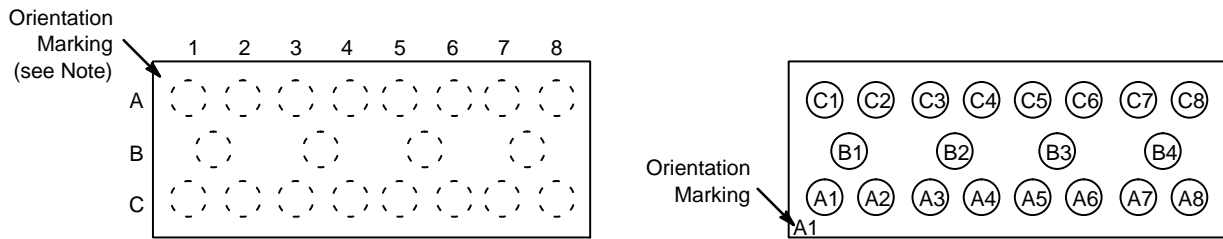
†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, BRD8011/D.



*See Package/Pinout Diagrams for expanded pin information.



CM1405-01
Chip Scale Package



CM1405-03
Chip Scale Package

Note: Lead-free devices are specified by using a "+" character for the top side orientation mark.

Storage Temperature Range	-65 to +150	°C
DC Power per Resistor	100	mW
DC Package Power Rating	500	mW

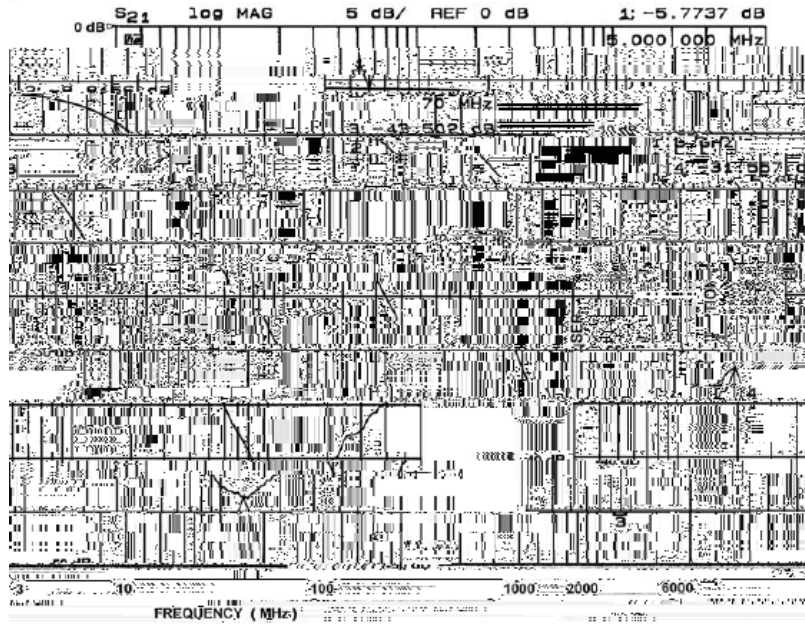
Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

Operating Temperature Range	-40 to +85	°C
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(Note 1)

R	Resistance		80	100	120	Ω
C	Capacitance	At 2.5 V DC, 1 MHz, 30 mV AC	20	25	30	pF
V _{DIODE}	Diode Standoff Voltage	I _{DIODE} = 10 μA		6.0		V

Ω



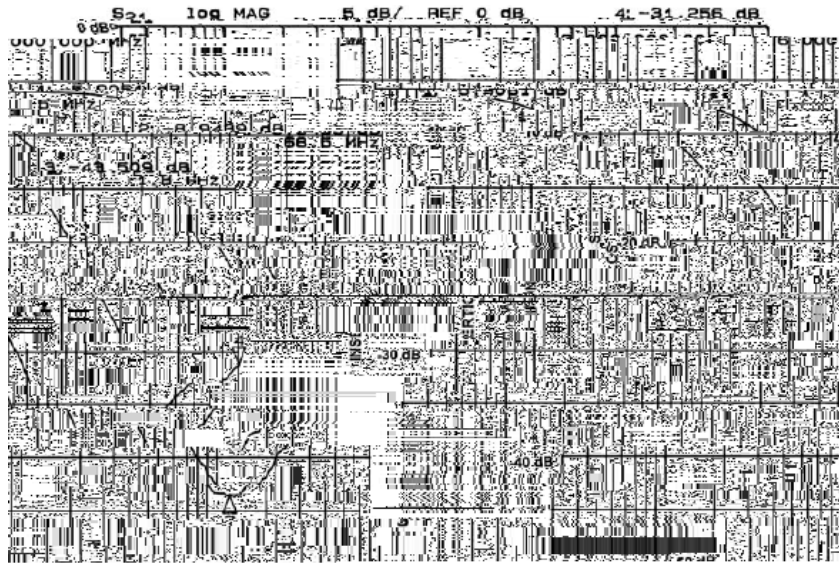
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Sea Time M&B 5/18/2008 11:00 AM

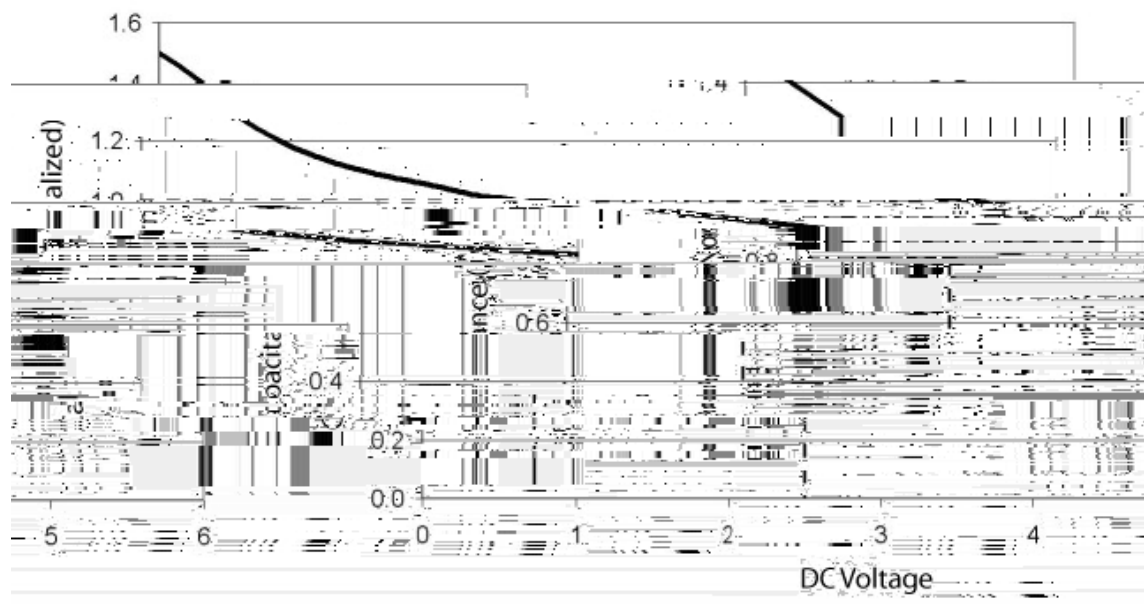
Sea Time M&B 5/18/2008 11:00 AM



Ω



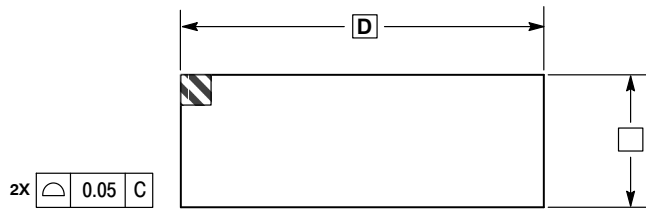
S₂₁ log MAG 5 dB/ REF 0 dB 1: -5.7697 dB



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WLCSP20, 4.00x1.46
CASE 567BZ
ISSUE O

DATE 26 JUL 2010

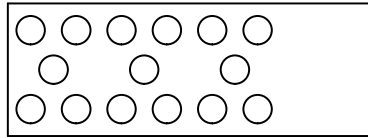
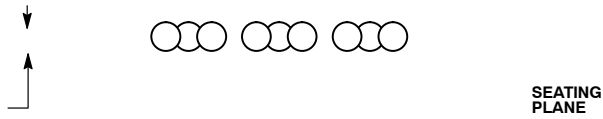


NOTES:

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	0.56	0.65
A1		

b	0.29	0.35
D	4.00 BSC	
E		
eD	0.50 BSC	



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