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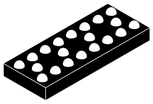


WLCSP20
CP SUFFIX
CASE 567BY

MARKING DIAGRAM

N548

CM1454−08
20−Bump CSP Package

N548 = CM1454−08CP

ORDERING INFORMATION

Device	Package	Shipping†
CM1454−08CP	CSP−20 (Pb−Free)	3500/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.

- ±15 kV ESD Protection on Each Channel (IEC 61000−4−2 Level 4, Contact Discharge)
- ±30 kV ESD Protection on Each Channel (HBM)
- Chip Scale Package (CSP) Features Extremely Low Parasitic Inductance for Optimum Filter and ESD Performance
- 20−Bump, 3.960 mm x 1.586 mm Footprint CSP
- These Devices are Pb−Free and are RoHS Compliant

Applications

- Combination I/O Data Port that has I/Os for Data, Microphone and Speaker
- I/O Port Protection for Mobile Handsets, Notebook Computers, PDAs, etc.
- EMI Filtering for Data Ports in Cell Phones, PDAs or Notebook Computers
- Wireless Handsets
- Handheld PCs / PDAs

C Filters with ESD Protection for Microphone and Data

ELECTRICAL SCHEMATIC

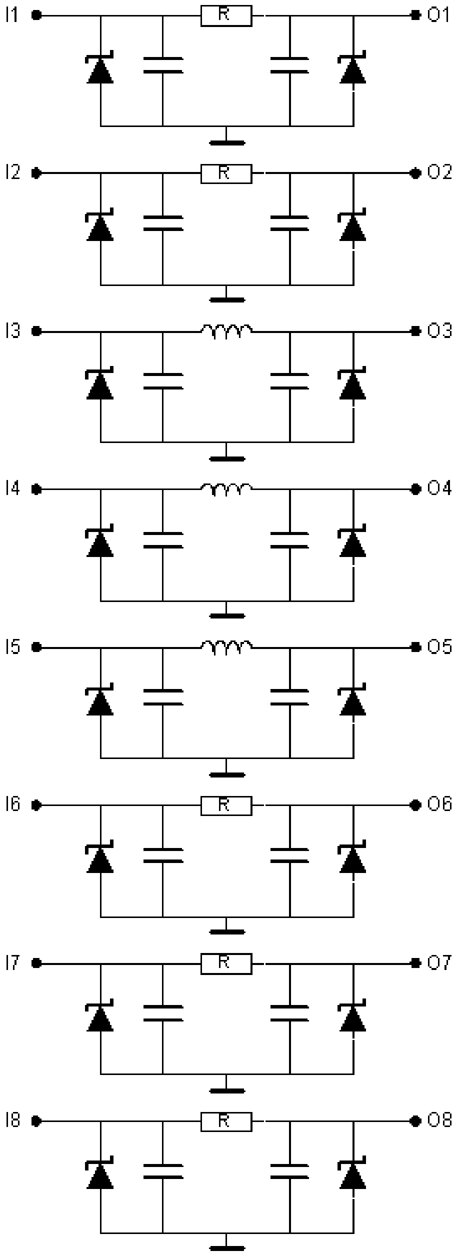
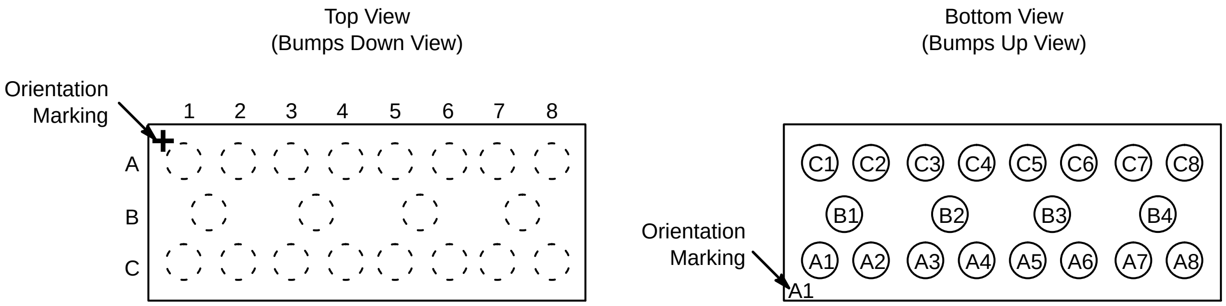


Figure 1. CM1454 Schematic Diagram of R C and L C Filter Arrays with ESD

PACKAGE / PINOUT DIAGRAMS


Top View (Bumps Down View)

Bottom View (Bumps Up View)

CM1454−08CP
20−Bump CSP

Table 1. PIN DESCRIPTIONS

Pin Number	Pin Description	Pin Number	Pin Description
A1	Filter #1 (Microphone)	C1	Filter #1
A2	Filter #2 (Microphone)	C2	Filter #2
A3	Filter #3 (Stereo Headphone)	C3	Filter #3
A4	Filter #4 (Left Speaker)	C4	Filter #4
A5	Filter #5 (Right Speaker)	C5	Filter #5
A6	Filter #6 (Accessory ID)	C6	Filter #6
A7	Filter #7 (Data)	C7	Filter #7
A8	Filter #8 (Data)	C8	Filter #8
B1−B4	GND		

SPECIFICATIONS

Table 2. ABSOLUTE MAXIMUM RATINGS

PERFORMANCE INFORMATION (Cont'd)

Typical Filter Performance (nominal conditions unless specified otherwise, 50 Ω Environment)

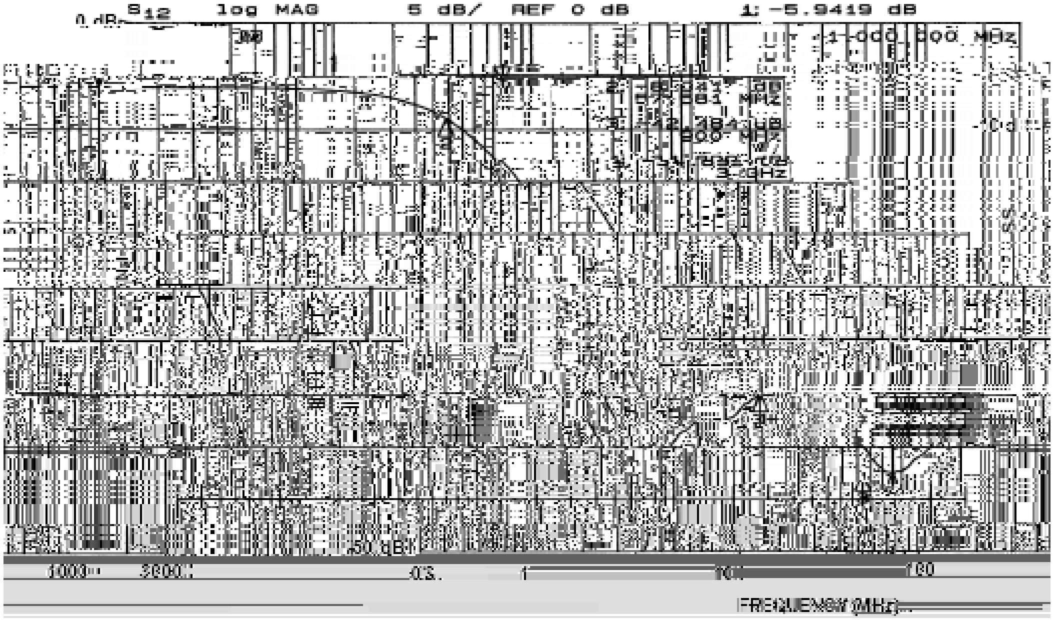


Figure 3. Attenuation Curve for CM1454 RC Filters: 1, 2, 6, 7, and 8

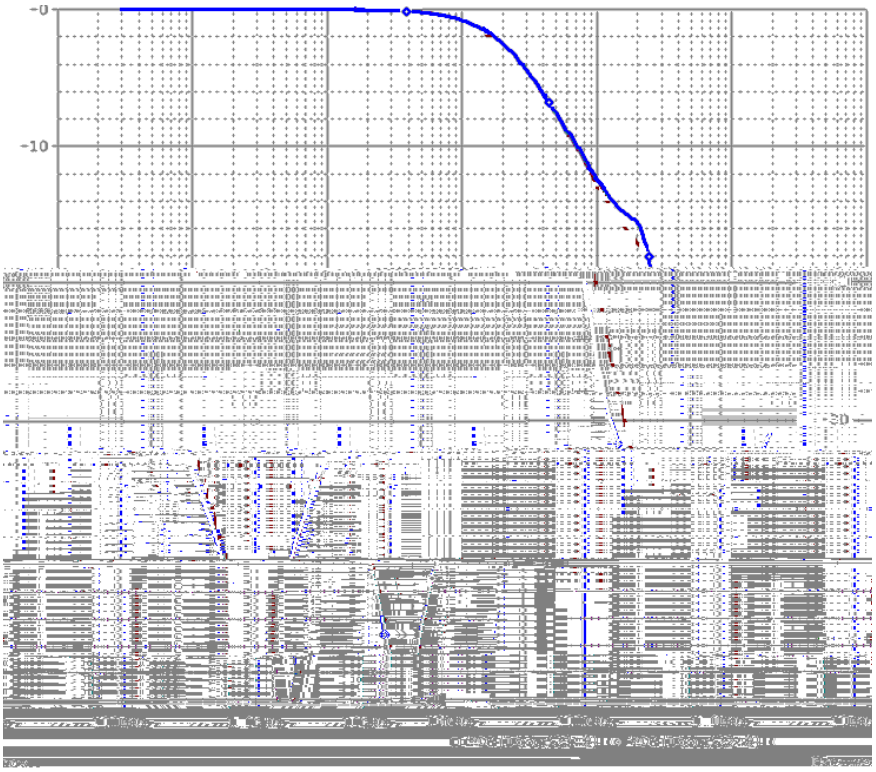


Figure 4. Attenuation Curve for CM1454 RC Filters: 3, 4, and 5

APPLICATION INFORMATION

Table 5. PRINTED CIRCUIT BOARD RECOMMENDATIONS

Parameter	Value
Pad Size on PCB	0.240 mm
Pad Shape	Round
Pad Definition	Non−Solder Mask defined pads
Solder Mask Opening	0.290 mm Round
Solder Stencil Thickness	0.125 − 0.150 mm
Solder Stencil Aperture Opening (laser cut, 5% tapered walls)	0.300 mm Round
Solder Flux Ratio	50/50 by volume
Solder Paste Type	No Clean
Pad Protective Finish	OSP (Entek Cu Plus 106A)
Tolerance − Edge To Corner Ball	±50 μm
Solder Ball Side Coplanarity	±20 μm
Maximum Dwell Time Above Liquidous	60 seconds
Maximum Soldering Temperature for Lead−free Devices using a Lead−free Solder Paste	260°C

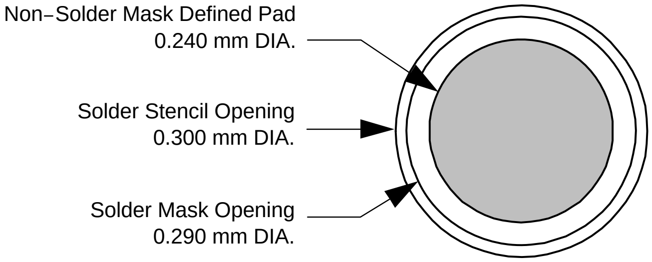


Figure 5. Recommended Non Solder Mask Defined Pad Illustration

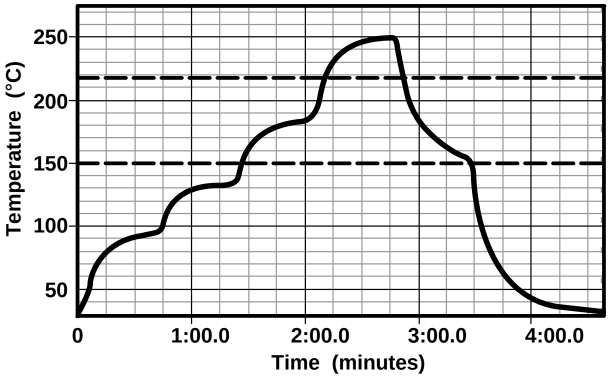


Figure 6. Lead free (SnAgCu) Solder Ball Reflow Profile

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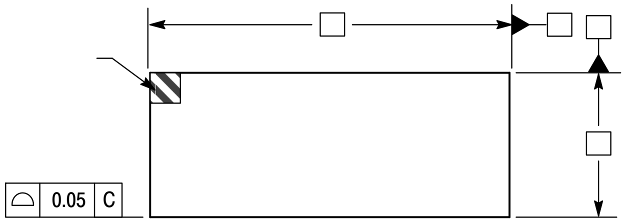
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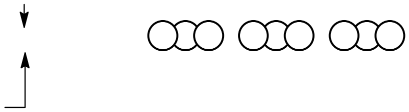

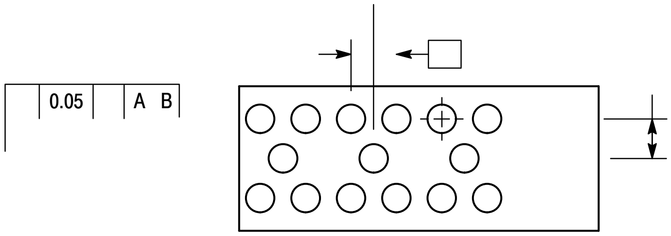
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