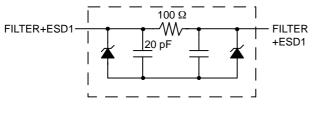
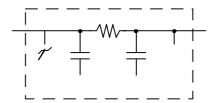
4-C" EMIR A

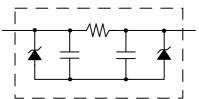
Product Description

The CM1425 is an EMI filter array with ESD protection, which integrates 4 pi filters (C–R–C). The CM1425 has component values of 20 pF - 100 Ω - 20 pF. The parts include ESD protection 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 ± 15 kV, well beyond the maximum requirement of the IEC $61000{-}4{-}$

BLOCK DIAGRAM







SPECIFICATIONS

Table 2. ABSOLUTE MAXIMUM RATINGS

Parameter	Rating	Units
Storage Temperature Range	-65 to +150	°C
DC Power per Resistor	100	mW
DC Package Power Rating	300	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.

Table 3. STANDARD OPERATING CONDITIONS

Parameter	Rating	Units
Operating Temperature Range	-40 to +85	°C

Table 4. ELECTRICAL OPERATING CHARACTERISTICS (Note 1)

Symbol	Parameter	Conditions	Min	Тур	Max	Units
R	Resistance		80	100	120	Ω
С	Capacitance	At 2.5 V DC, 1 MHz, 30 mV AC	16	20	24	pF
V _{DIODE}	Diode Standoff Voltage	I _{DIODE} = 10				

PERFORMANCE INFORMATION

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



Figure 1. CM1425 Filter Typical Measured Frequency Response

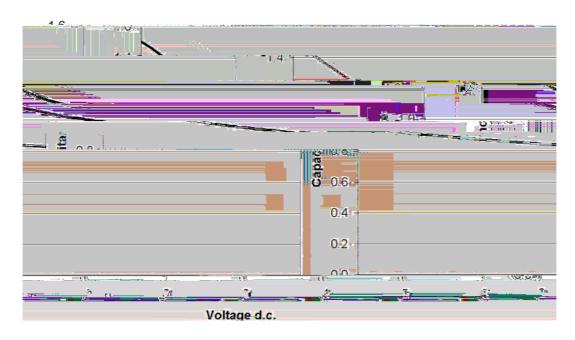


Figure 2. Filter Capacitance vs. Input Voltage over Temperature (normalized to capacitance at 2.5 VDC and 25°C)

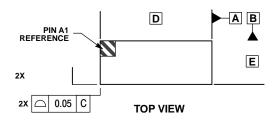
APPLICATION INFORMATION

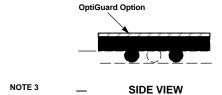
Table 5. PRINTED CIRCUIT BOARD RECOMMENDATIONS

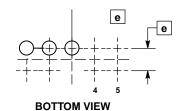
Parameter	Value
Pad Size on PCB	0.240 mm
Pad Shape	Round
Pad Definition	Non–Solder Mask defined pads
Solder Mask Opening	0.290 mm Round
Solder Stencil Thickness	0.125 – 0.150 mm
Solder Stencil Aperture Opening (laser cut, 5% tapered walls)	0.300 mm Round











NOTES:

- NOTES:

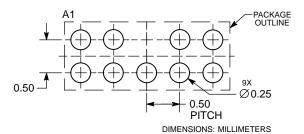
 1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.

 2. CONTROLLING DIMENSION: MILLIMETERS.

 3. COPLANARITY APPLIES TO SPHERICAL CROWNS OF SOLDER BALLS.

	MILLIMETERS			
DIM	MIN	MAX		
Α	0.56	0.72		
A1				
A2	0.42 REF			
b	0.29	0.35		
D	2.47 BSC			
E				
е	0.50 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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