Spectrum Component Sales, Inc. * Sales & Distribution *
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105 Hill Street, Ste 2D * Norcross, GA 30017 USA * sales@scsiglobal.com

Data Line EMI Filters - DLEF Series

These filters virtually eliminate conducted EMI in data lines. They provide excellent common-mode noise attenuation from 15 MHz to 300 MHz whilst passing data signals below 300 MHz without attenuation.

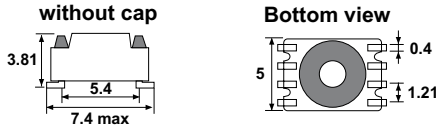
- Suited for IR and vapor reflow soldering
- Materials meet UL94-V0 rating
- Operating temperature range : -40 °C to +100 °C
- Weight : 0.5 gram

Electrical Data

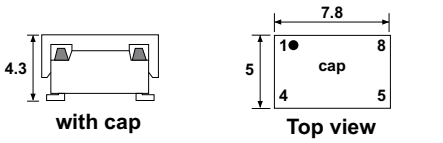
ID Code	Number of lines	Max. Current mA	L/winding µH	RDC max mΩ	Isolation Vrms
DLEF12 020 1S	2	100	5	250	250
DLEF13 020 1S	3	100	5	250	250
DLEF14 020 1S	4	100	5	250	250

Typical Dimensions (mm)

DLEF0x xxx xS

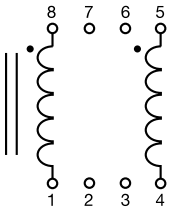


DLEF1x xxx xS

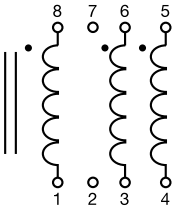


Connections

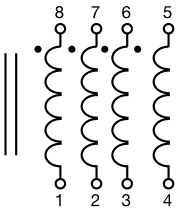
DLEFx2 xxx xS



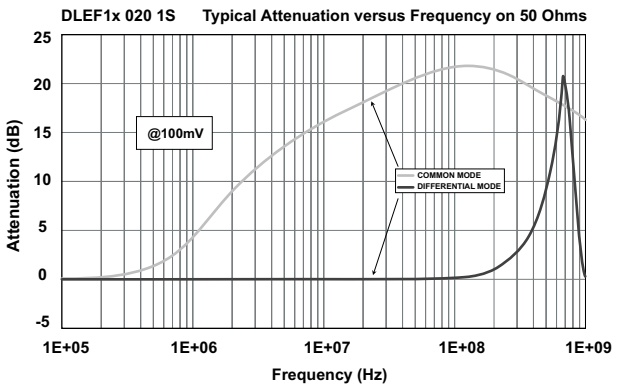
DLEFx3 xxx xS



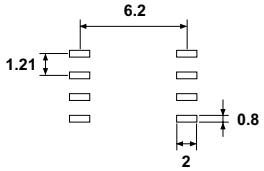
DLEFx4 xxx xS



Response Curves



PCB Layout (suggested)



Packaging

Tape and Reel : 2200 pieces

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EMI Suppression Chokes - ESC Series

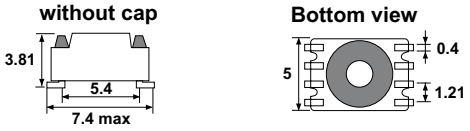
These common-mode chokes provide excellent attenuation of asymmetric EMI on signal lines and in switch-mode power supplies.

- Surface-mount package
- Suited for IR and vapor reflow soldering
- Materials meet UL94-V0 rating
- Frequency range up to 100 MHz
- Operating temperature range: -40 °C to +125 °C
- Weight: 0.5 gram

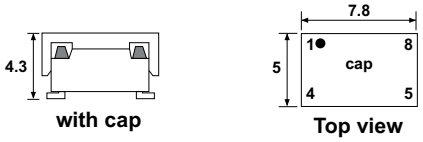
Electrical Data

Part Number (typical values)	Inductance at 100 kHz µH	Rdc Max (at 80°C) m	Impedance at 100 MHz Ω	Attenuation 50Ω at 10MHz dB	Rated Current max mA	Isolation between windings Vrms
ESC X1 15K 1S	15	20	100	6,5	750	250
ESC X1 56K 1S	56	35	250	12	600	250
ESC X1 M47 1S	470	470	1200	27,5	250	250

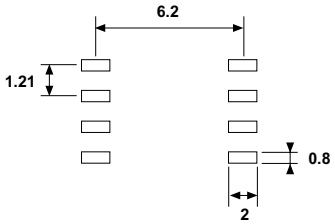
ESC0x xxx xS



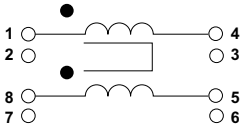
ESC1x xxx xS



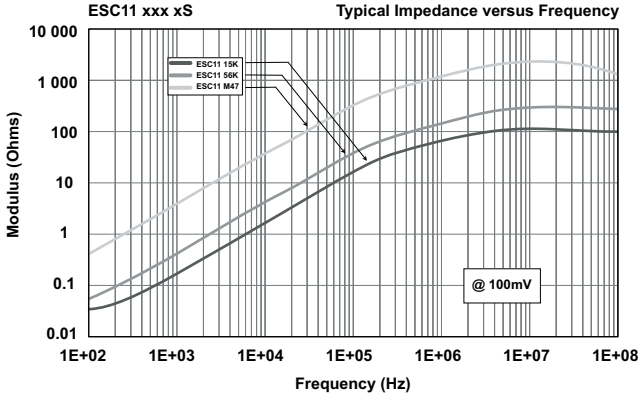
PCB Layout
(suggested)

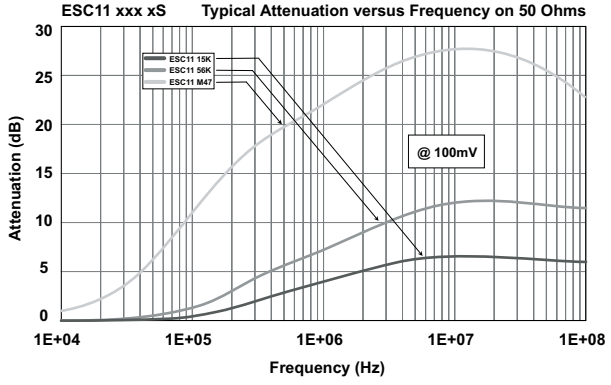


Connections



Packaging
Tape and Reel: 2200 pieces





Common-Mode Chokes - ICMC Series

- 2-fo ld current-compensated chokes
- 4-fold current-compensated chokes
- High insertion loss over a wide frequency range
- High inductance values
- Low total losses
- Amorphous and ferrite toroids, encapsulated in polymer materials listed in UL94-V0
- Flat or upright cases
- Operating temperature range -25 °C +70 °C

Electrical Data

Part Number	Ln mH	In A eff	LF µH	Rdc Ω
				2-fold chokes
ICMC12 1M0 1X	2x1	0.5	0.2	0.1
ICMC12 1M7 1X	2x1.7	0.5	0.2	0.15
ICMC12 3M3 1X	1x3.3	0.4	0.25	0.2
ICMC12 4M7 1X	2x4.7	0.4	0.3	0.25
ICMC12 6M8 1X	2x6.8	0.3	0.4	0.3
ICMC12 10M 1X	2x10	0.3	0.45	0.4
ICMC12 12M 1X	2x12.5	0.3	0.5	0.45
ICMC12 28M 1X	2x28	0.25	1	0.8
ICMC12 39M 1X	2x39	0.25	1.1	1
ICMC12 50M 1X	2x50	0.25	1.2	1.1
ICMC12 70M 1X	2x70	0.2	1.4	1.2
				4-fold chokes
ICMC14 1M0 1X	4x1	0.5	0.2	0.1
ICMC14 1M7 1X	4x1.7	0.5	0.25	0.15
ICMC14 3M6 1X	3x3.6	0.4	0.4	0.2
ICMC14 5M0 1X	4x5	0.3	0.45	0.25
ICMC14 6M0 1X	4x6	0.3	0.45	0.3
ICMC14 7M8 1X	4x7.8	0.25	0.5	0.4
ICMC14 10M 1X	4x10	0.25	0.5	0.45
ICMC14 11M 1X	4x11.5	0.2	0.5	0.6
ICMC14 40M 1X	4x40	0.15	0.9	1.2
ICMC14 58M 1X	4x58	0.15	0.5	0.9
ICMC14 90M 1X	4x90	0.15	0.5	1.4

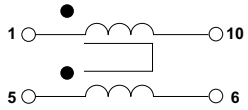
Dielectric strength 500 Vrms for 2 seconds.

Symbols

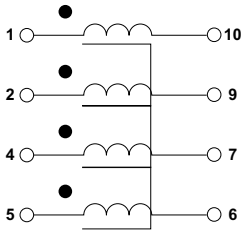
In = permissible rated current of a winding
Ln = rated inductance of a winding (tol. +50 %/-30 % ; f = 10 kHz ; U = 100 mVrms)
LF = leakage inductance of a winding when all other windings short circuit (nominal value)
Rdc = DC resistance of winding (nominal value)

Connections

2-fold chokes ICMC12 xxx xx

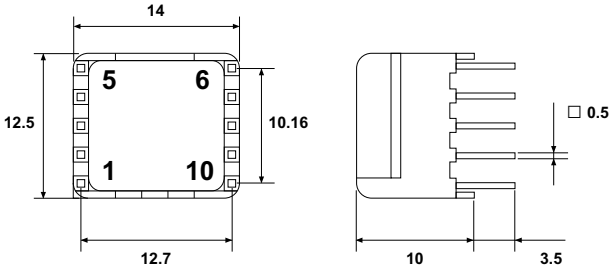


4-fold chokes ICMC14 xxx xx

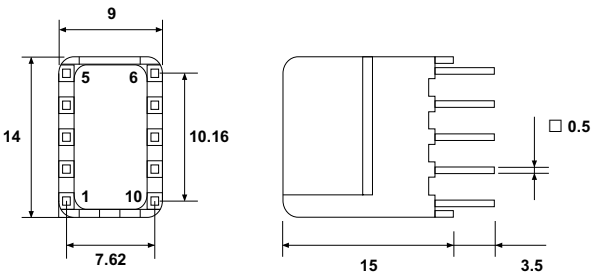


Typical Dimensions (mm)

Horizontal design ICMCxx xxx xH



Vertical design ICMCxx xxx xV



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Line Common Mode Choke - LCMC

- Improved EMI performance for FCC class B applications
- Maximum common mode attenuation at 1 MHz
- Well suited for many telecom applications
- Surface mount package
- Materials meet UL94-V0 rating
- Temperature range : 0 °C to +70 °C
- Weight <1 gram

Electrical Data

Part Number	OCL (mH +30%/-40%)	Common Mode Attenuation (db typ. @ 100kHz)	(db typ. @ 1MHz)	(db typ. @ 10MHz)	I max eff (mA)	Isolation (Vrms min)	DCR (Ω max)
LCMC 20 4M7 1S	2 x 4.7	29	40	24	35	500	1.15

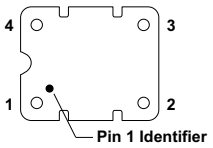
Note : values measured at 10 kHz, 100 mV_{RMS} at 25°C. Dielectric strength : 500 V_{RMS} - 50Hz - 1min

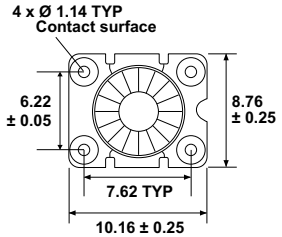
To Order

LCMC 20 4M7 1S

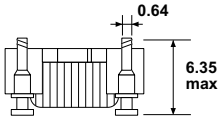
LCMC	20	4M7	1	S
Line Common Mode Chokes	Size	Value code 4M7 = 4,7 mH	Version	SMD

Typical Dimensions (mm)

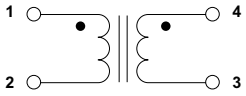




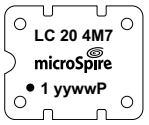
Bottom view



Connections

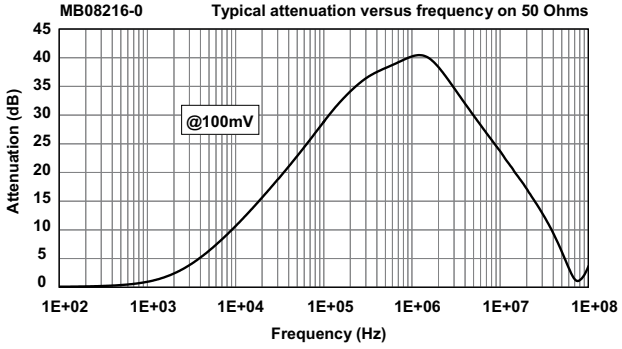


Marking



yyww :
Date code

Frequency Response



Measurement Circuit

Attenuation measured with
HP4194A at 100 mVrms
(Z = 50 Ohms)