Chip Inductors CFM0603LS-Series

- CFM0603LS- Series

1.Dimensions(mm)

- Higher inductance values than other 0603 inductors
- Ferrite construction for high current handling
- Inductance values: 47 nH – 22 µH; 5% and 2% tolerance

Designer's Kit C347 contains 10 each of all 5% values

Core material Ceramic/Ferrite

Environmental RoHS compliant, halogen free

Terminations Silver-palladium-platinum-glass frit. Other terminations available at additional cost.

Weight 4.8 – 6.2 mg

Ambient temperature –40°C to +85°C with Irms current

Maximum part temperature +100°C (ambient + temp rise)

Storage temperature Component: –40°C to +100°C. Tape and reel packaging: –40°C to +80°C

Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

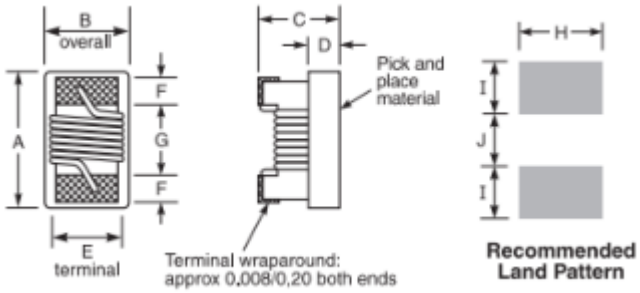
Temperature Coefficient of Inductance (TCL) +50 to +150 ppm/°C

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Failures in Time (FIT) / Mean Time Between Failures (MTBF) One per billion hours / one billion hours, calculated per Telcordia SR-332

Packaging 2000 per 7" reel. Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.17 mm pocket depth

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.



NO.	A (max)	B (max)	C (max)	D Typ.	E	F	G	H	I	J
Spec.	0.071	See	0.044	0.015	0.030	0.013	0.034	0.040	0.025	0.025
	1.80	note	1.12	0.38	0.76	0.33	1.02	1.02	0.64	0.64

Note: B1 = 0.040 ±0.004 in / 1,016 ±0,102 mm
B2 = 0.046 ±0.004 in / 1,169 ±0,102 mm
Height dimension (C) is before optional solder application. For maximum height dimension including solder, add 0.006 in / 0,152 mm.

2. Electrical characteristics

Part number1	Inductance2 (nH)	Percent tolerance	Q min3	SRF min (MHz)	DCR max5 (Ohms)	Irms6
CFM0603LS-47NX-E-	47@7.9MHz	5.2	12@7.9MHz	1500	0.075	1.40
CFM0603LS-51NX-E-	51@7.9MHz	5.2	12@7.9MHz	1400	0.075	1.00
CFM0603LS-72NX-E-	72@7.9MHz	5.2	12@7.9MHz	1400	0.12	1.40
CFM0603LS-101X-E-	100@7.9MHz	5.2	12@7.9MHz	1150	0.13	1.40
CFM0603LS-121X-E-	120@7.9MHz	5.2	15@7.9MHz	1100	0.15	1.40
CFM0603LS-151X-E-	150@7.9MHz	5.2	15@7.9MHz	1050	0.15	1.30
CFM0603LS-181X-E-	180@7.9MHz	5.2	15@7.9MHz	950	0.15	1.30
CFM0603LS-241X-E-	240@7.9MHz	5.2	15@7.9MHz	800	0.16	0.95
CFM0603LS-271X-E-	270@7.9MHz	5.2	15@7.9MHz	775	0.30	0.71

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Part number1	Inductance2 (nH)	Percent tolerance	Q min3	SRF min (MHz)	DCR max5 (Ohms)	Irms6
CFM0603LS-331X-E-	330@7.9MHz	5.2	15@7.9MHz	725	0.46	0.56
CFM0603LS-391X-E-	390@7.9MHz	5.2	15@7.9MHz	620	0.51	0.50
CFM0603LS-471X-E-	470@7.9MHz	5.2	15@7.9MHz	540	0.62	0.42
CFM0603LS-561X-E-	560@7.9MHz	5.2	15@7.9MHz	525	0.44	0.55
CFM0603LS-681X-E-	680@7.9MHz	5.2	15@7.9MHz	260	0.52	0.47
CFM0603LS-781X-E-	780@7.9MHz	5.2	15@7.9MHz	460	0.83	0.39
CFM0603LS-821X-E-	820@7.9MHz	5.2	15@7.9MHz	410	0.69	0.40
CFM0603LS-102X-E-	1000@7.9MHz	5.2	15@7.9MHz	190	0.81	0.40
CFM0603LS-122X-E-	1200@7.9MHz	5.2	15@7.9MHz	160	0.87	0.37
CFM0603LS-152X-E-	1500@7.9MHz	5.2	15@7.9MHz	100	0.96	0.35
CFM0603LS-182X-E-	1800@7.9MHz	5.2	15@7.9MHz	80	1.1	0.35
CFM0603LS-222X-E-	2200@7.9MHz	5.2	15@7.9MHz	68	1.2	0.32
CFM0603LS-272X-E-	2700@7.9MHz	5.2	15@7.9MHz	60	1.5	0.28
CFM0603LS-332X-E-	3200@7.9MHz	5.2	15@7.9MHz	42	1.5	0.28
CFM0603LS-392X-E-	3900@7.9MHz	5.2	15@7.9MHz	40	1.6	0.28
CFM0603LS-472X-E-	4700@7.9MHz	5.2	15@7.9MHz	34	2.1	0.26
CFM0603LS-562X-E-	5600@7.9MHz	5.2	15@7.9MHz	32	2.6	0.24
CFM0603LS-682X-E-	6800@7.9MHz	5.2	15@7.9MHz	31	3.1	0.20
CFM0603LS-782X-E-	7800@7.9MHz	5.2	15@7.9MHz	28	3.5	0.20
CFM0603LS-822X-E-	8200@7.9MHz	5.2	15@7.9MHz	26	3.6	0.19
CFM0603LS-103X-E-	10000@2.5MHz	5.2	12@7.9MHz	25	4.8	0.18
CFM0603LS-153X-E-	15000@2.5MHz	5.2	20@7.9MHz	23	7.1	0.17
CFM0603LS-183X-E-	18000@2.5MHz	5.2	20@7.9MHz	22	7.6	0.16
CFM0603LS-223X-E-	22000@2.5MHz	5.2	20@7.9MHz	19	8.81	0.13

1. When ordering, specify **tolerance, termination** and **packaging** codes:

0603LS-822XJEC

Tolerance: **G** = 2% **J** = 5% (Table shows stock tolerances in bold.)
Termination: **E** = Halogen free component. RoHS compliant silver-palladium-platinum-glass frit terminations.
L = RoHS compliant, not halogen-free. Silver-palladium-platinum-glass frit terminations.
Special order: **T** = RoHS tin-silver-copper (95.5/4/0.5) or **S** = non-RoHS tin-lead (63/37).
Packaging: **C** = 7" machine-ready reel. EIA-481 embossed plastic tape (2000 parts per full reel).
B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added ($25 charge), use code letter C instead.

2. Inductance measured at 0.1 Vrms, using Coilcraft SMD-A fixture in Agilent/HP 4286A impedance analyzer with Coilcraft-provided correlation pieces.
3. Q measured on Agilent/HP 4395A with Agilent/HP 16193 test fixture.
4. SRF measured using Agilent/HP 8753D network analyzer with Coilcraft SMD-D test fixture.
5. DCR measured on Cambridge Technology Micro-ohmmeter.
6. Current that causes a 15°C temperature rise from 25°C ambient. Because of their open construction, these parts will not saturate. This information is for reference only and does not represent absolute maximum ratings
7. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

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