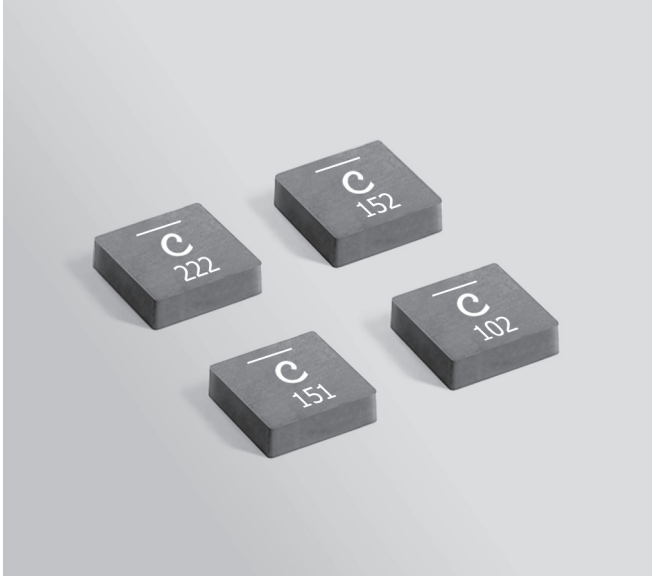
HIGH TEMPERATURE

Shielded Power Inductors – XAL7020



- High current and very low DCR
- Soft saturation makes them ideal for VRM/VRD applications.

Designer's Kit C452 contains 3 of each value..

Core material Composite

Environment RoHS compliant, halogen free

Terminations RoHS compliant tin-silver (96.5/3.5) over copper. Other terminations available at additional cost.

Weight 0.83 g

Ambient temperature –40°C to +125°C with Irms current, +125°C to +165°C with derated current.

Storage temperature Component: –40°C to +165°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

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

Failures in Time (FIT) / Mean Time Between Failures (MTBF) 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

Packaging 500/7″ reel; 2000/13″ reel Plastic tape: 16 mm wide, 0.30 mm thick, 12 mm pocket spacing, 2.2 mm pocket depth

PCB washing Only pure water or alcohol recommended

Part number[1]	Inductance[2] ±20% (µH)	DCR (mOhms)[3] typ	DCR (mOhms)[3] max	SRF typ[4] (MHz)	Isat[5] (A)	Irms (A)[6] 20°C rise	Irms (A)[6] 40°C rise
XAL7020-151ME_	0.15	1.9	2.5	161	46.0	18	24
XAL7020-271ME_	0.27	2.9	3.8	112	30.0	15	21
XAL7020-331ME_	0.33	4.0	5.2	88	28.0	14	20
XAL7020-471ME_	0.47	5.3	6.4	72	24.3	12	17
XAL7020-681ME_	0.68	7.9	9.5	54	22.3	10	13
XAL7020-102ME_	1.0	9.8	10.8	46	16.4	8.0	11
XAL7020-122ME_	1.2	11.5	12.8	42	14.5	7.0	10
XAL7020-152ME_	1.5	16.7	18.6	37	11.7	6.0	9.0
XAL7020-222ME_	2.2	24.4	27.5	29	11.2	5.0	7.0

Irms Testing

Irms testing was performed on 0.75 inch wide × 0.25 inch thick copper traces in still air.

Temperature rise is highly dependent on many factors including pcb land pattern, trace size, and proximity to other components. Therefore temperature rise should be verified in application conditions.

1. When ordering, please specify **packaging** code:

XAL7020-222MEC

Packaging: **C** = 7″ machine-ready reel. EIA-481 embossed plastic tape (500 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.
D = 13″ machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (2000 parts per full reel).

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc.
3. DCR measured on a micro-ohmmeter.
4. SRF measured using Agilent/HP 4395A or equivalent.
5. DC current at which the inductance drops 30% (typ) from its value without current.
6. Current that causes the specified temperature rise from 25°C ambient.
7. Electrical specifications at 25°C.

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

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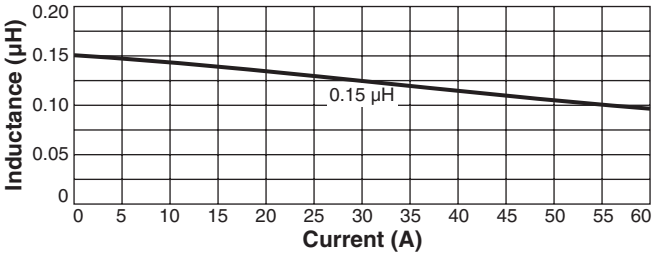
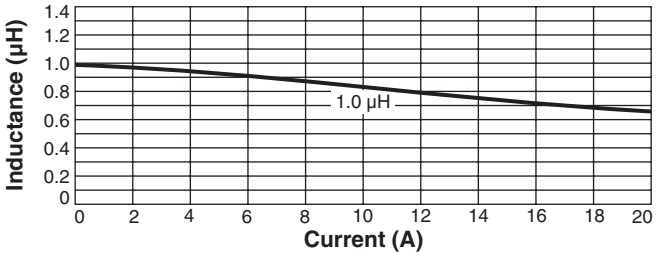
HIGH TEMPERATURE

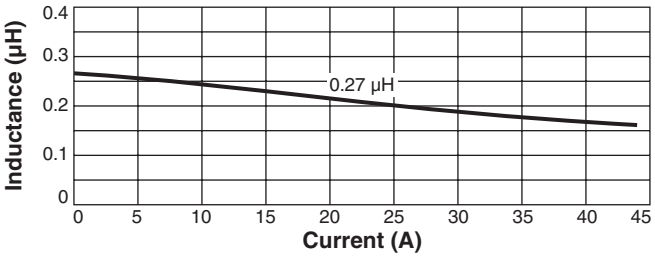
RoHS Halogen Free

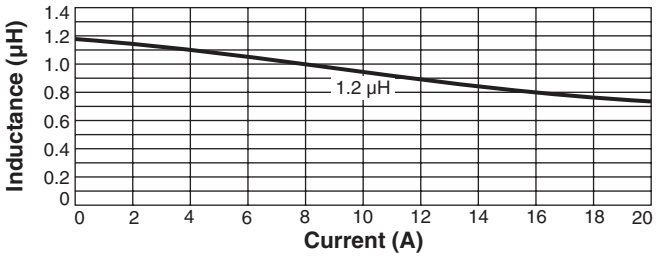
Shielded Power Inductors – XAL7020

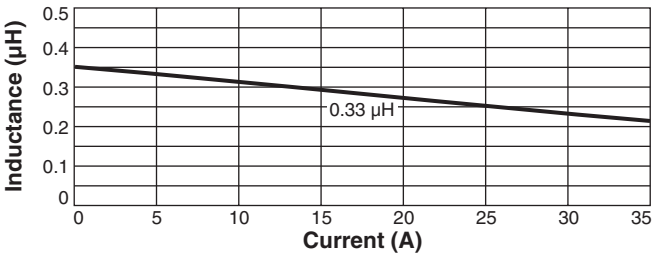
L vs Current

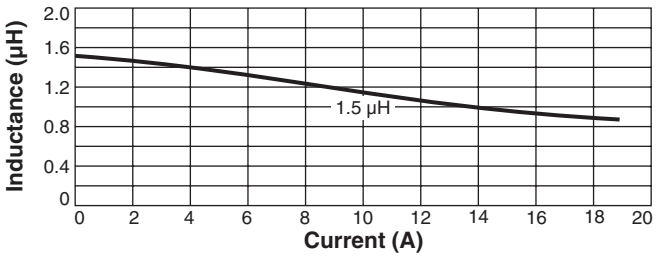


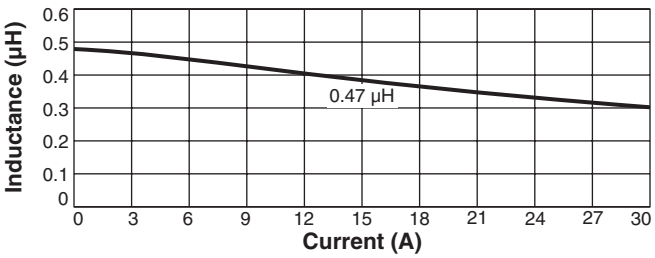


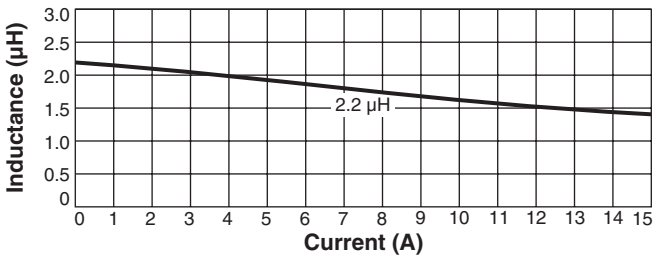


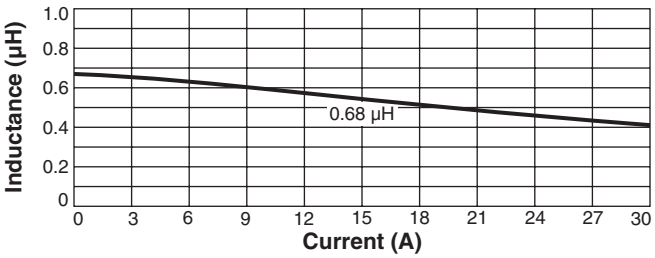












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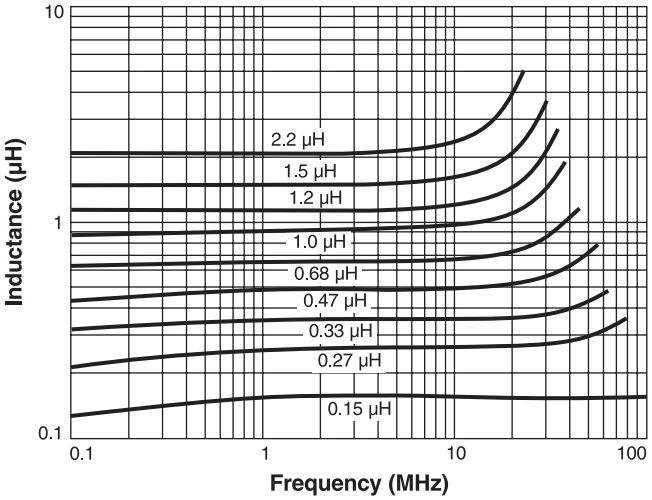
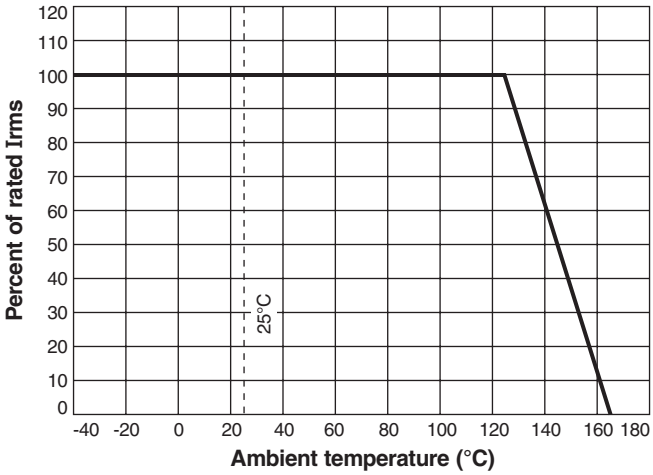
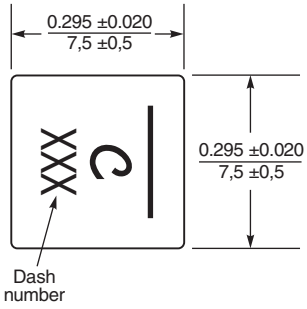
L vs Frequency

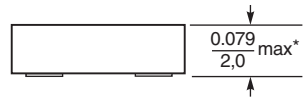


Irms Derating

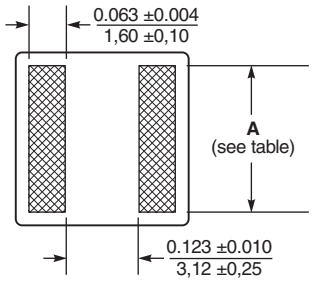




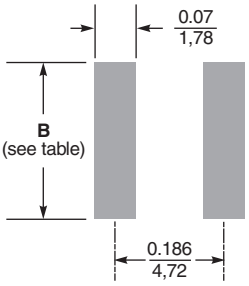
Dash number	A ±0.008 in ±0,20 mm (in / mm)	B (in / mm)
-151	0.249 / 6.32	0.257 / 6.52
-271	0.249 / 6.32	0.257 / 6.52
-331	0.245 / 6.22	0.251 / 6.37
-471	0.245 / 6.22	0.251 / 6.37
-681	0.241 / 6.12	0.245 / 6.22
-102	0.241 / 6.12	0.245 / 6.22
-122	0.241 / 6.12	0.245 / 6.22
-152	0.239 / 6.08	0.242 / 6.16
-222	0.238 / 6.04	0.240 / 6.10



*Maximum height for -151 and -271 is 0.81 in / 2,05 mm.



Dimensions are in inches / mm



Recommended Land Pattern

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