



Dual Inductor for Class-D – GA3416-CL



- Dual inductor for use in Class-D output filter
- Very low magnetic coupling
- AEC-Q200 Grade 1 qualified
- Shielded surface mount package with both coils and additional mounting pads for excellent board adhesion

Output Power

Power typ (W)	Temperature rise from 25°C (°C)	Load	THD+N	Test condition
21	17.0	4 Ohm	1%	1 kHz, 14.4 Vdc
25	20.0	4 Ohm	10%	1 kHz, 14.4 Vdc
44	30.7	4 Ohm	1%	1 kHz, 21 Vdc
54	35.0	4 Ohm	10%	1 kHz, 21 Vdc
33	46.5	2 Ohm	1%	1 kHz, 14.4 Vdc
40	51.6	2 Ohm	10%	1 kHz, 14.4 Vdc

Part number ¹	Maximum power (W) ²		Inductance ³ ±10% (µH)	DCR max ⁴ (Ohms)	SRF typ ⁵ (MHz)	THD+N ⁶ (%)	Isat (A) ⁷			Irms (A) ⁸	
	2 Ohm load	4 Ohm load					10% drop	20% drop	30% drop	20°C rise	40°C rise
GA3416-CL_	28	60	10.0	0.021	23.6	<0.1	8.6	8.7	8.8	3.0	4.3

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

GA3416-CLD

Termination: L = RoHS compliant tin-silver (96.5/3.5) over copper (leads), gold over nickel over phos bronze (additional mounting pads).

Special order: T = RoHS tin-silver-copper (95.5/4/0.5) or S = non-RoHS tin-lead (63/37).

Packaging: D = 13" machine-ready reel. EIA-481 embossed plastic tape (200 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to D.

2. Maximum power into specified load that causes a 40°C temperature rise. Measured at 1 kHz with a 14.4 Vdc supply for the 2-Ohm load and a 21 Vdc supply for the 4-Ohm load. Refer to Output Power table for typical output conditions. Tested using the TAS5414A Evaluation Board from Texas Instruments.

3. Inductance measured at 500 kHz, 0.5 Vrms, 0 Adc using an Agilent/HP 4284A impedance analyzer.

4. DCR measured on a micro-ohmmeter.

5. SRF measured using Agilent/HP 8753D network analyzer.

6. Total harmonic distortion + noise measured at 23 W into a 2-Ohm or 4-Ohm load at 1 kHz with a 21 Vdc supply.

7. DC current at 25°C that causes the specified inductance drop from its value without current.

8. Current applied to both windings at the same time that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.

9. Electrical specifications at 25°C.

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

Core material Ferrite

Terminations RoHS compliant tin-silver (96.5/3.5) over copper (leads), electroplated gold (<50 µin) over nickel over phos bronze (additional mounting pads). Other terminations available at additional cost.

Weight 7.8 g

Ambient temperature -40°C to +125°C with Irms current

Maximum part temperature +165°C (ambient + temp rise)

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)

Packaging 200/13" reel Plastic tape: 32 mm wide, 0.4 mm thick, 20 mm pocket spacing, 12.95 mm pocket depth

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).



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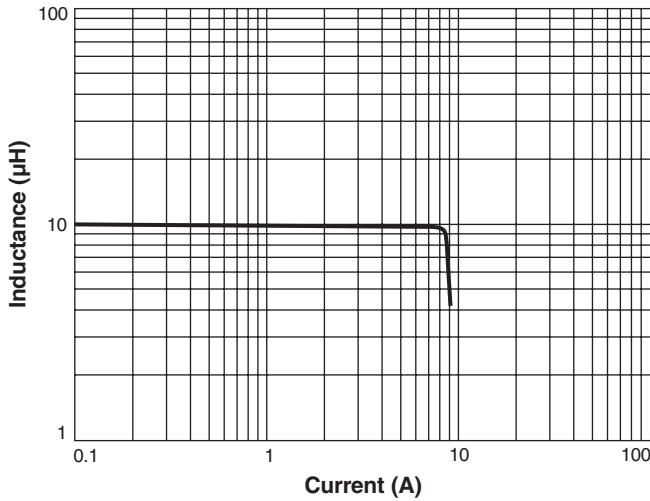
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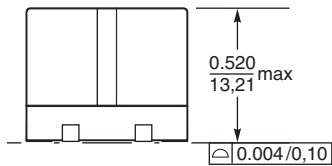
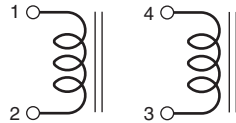
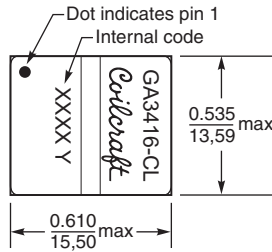
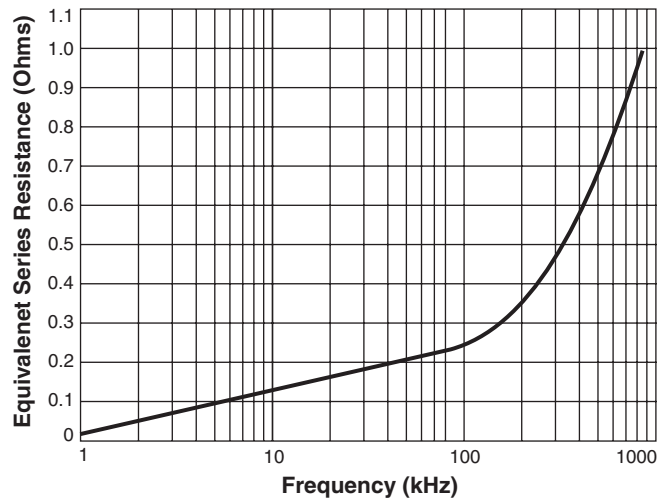


Class D Dual Inductor – GA3416-CL

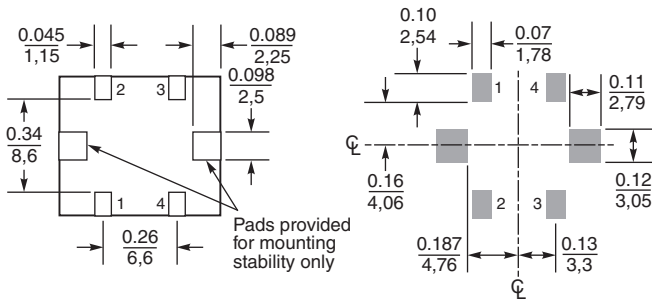
L vs Current



ESR vs Frequency



Recommended Land Pattern



Dimensions are in $\frac{\text{inches}}{\text{mm}}$



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