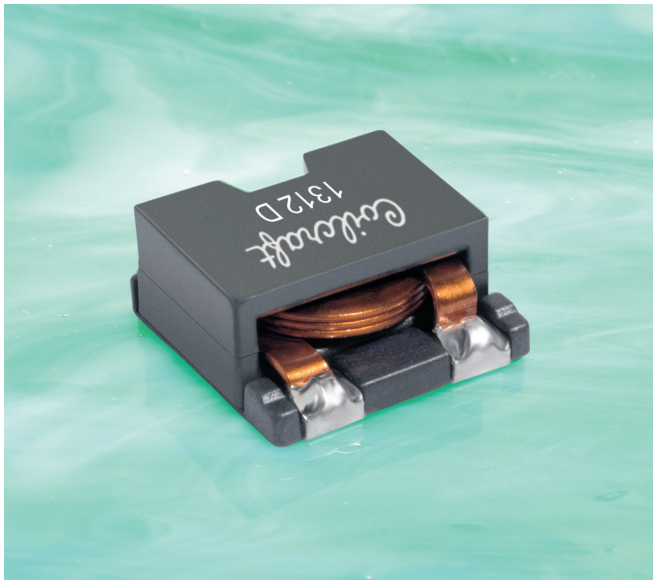
Power Inductors for Critical Applications ST598PTA



- Exceptionally high current carrying capability (up to 43 Amps) and very low DC resistance
- Magnetic shielding allows high density mounting; flat wire winding keeps the overall height to just 6 mm

Core material Ferrite

Terminations Terminals 1 and 2: Tin-silver over tin over nickel over phos bronze; Terminal 3: Matte tin over nickel over phos bronze. Other terminations available at additional cost.

Weight 2.3 – 3.2 g

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

Maximum part temperature +125°C (ambient + temp rise).

Storage temperature Component: –55°C to +125°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 500 per 13″ reel; Plastic tape: 24 mm wide, 0.4 mm thick, 16 mm pocket spacing, 6.6 mm pocket depth

Part number[1]	Inductance[2] ±10% (µH)	DCR (mOhm)[3] typ	DCR (mOhm)[3] max	SRF (MHz)[4] min	SRF (MHz)[4] typ	Isat (A)[5] 10% drop	Isat (A)[5] 20% drop	Isat (A)[5] 30% drop	Irms (A)[6] 20°C rise	Irms (A)[6] 40°C rise
ST598PTA331KLZ	0.33	0.77	0.85	140	200	36	41	43	13.0	16.9
ST598PTA651KLZ	0.65	0.77	0.85	112	160	23	27	28	13.0	16.9
ST598PTA102KLZ	1.0	2.36	2.60	52.5	75.0	32	33	33.5	9.5	13.0
ST598PTA182KLZ	1.8	2.36	2.60	35.0	50.0	17	19	20	9.5	13.0
ST598PTA272KLZ	2.7	2.36	2.60	29.4	42.0	12	13	14	9.5	13.0
ST598PTA402KLZ	4.0	5.50	6.05	23.8	34.0	11	12	13	7.1	9.4
ST598PTA472KLZ	4.7	5.50	6.05	22.4	32.0	9.5	11	12	7.1	9.4
ST598PTA602KLZ	6.0	5.50	6.05	19.6	28.0	8.0	9.0	9.5	7.1	9.4
ST598PTA802KLZ	8.0	9.83	10.81	18.2	26.0	7.5	8.5	9.0	5.5	7.6
ST598PTA103KLZ	10	9.83	10.81	16.8	24.0	6.2	7.0	7.5	4.4	7.2
ST598PTA223KLZ	22	9.83	10.81	9.10	13.0	2.4	3.0	3.3	4.4	7.2

1. When ordering, please specify **termination** and **screening** codes.

ST598PTA223KLZ

Termination: **L** = Terminals 1 and 2: Tin-silver over tin over nickel over phos bronze; Terminal 3: Matte tin over nickel over phos bronze
Special order, added cost: **T** = All terminals: copper (95.5/4/0.5) over tin over nickel over phos bronze or
S = All terminals: Tin-lead (63/37) over tin over nickel over phos bronze.

Screening: **Z** = Unscreened
H = Coilcraft CP-SA-10001 Group A
G = Coilcraft CP-SA-10001 Group A (SLDC Option A)
D = Coilcraft CP-SA-10001 Group A (SLDC Option B)
All screening performed to the document's latest revision
Custom screening also available

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A or equivalent.
3. DCR measured on a micro-ohmmeter.
4. SRF measured using an Agilent/HP 8753D network analyzer.
5. DC current at 25°C that causes the specified inductance drop from its value without current.
6. Current that causes the specified temperature rise from 25°C ambient. 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.

Coilcraft CPS
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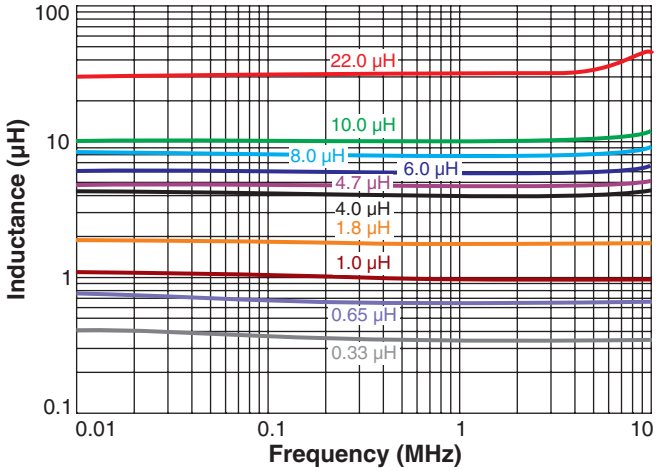
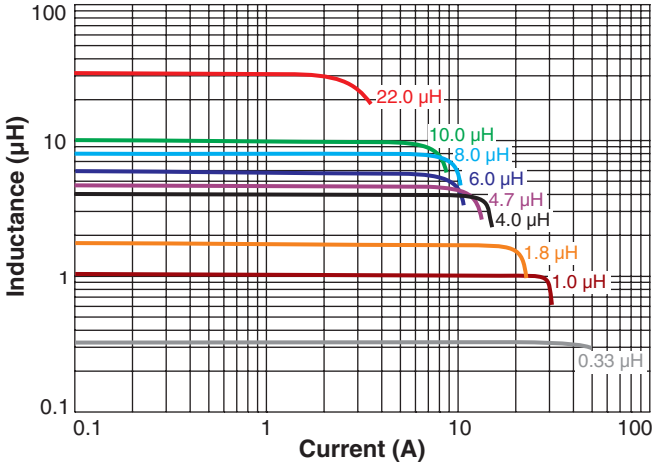
Document ST290-1 Revised 08/17/22

ST598PTA Series

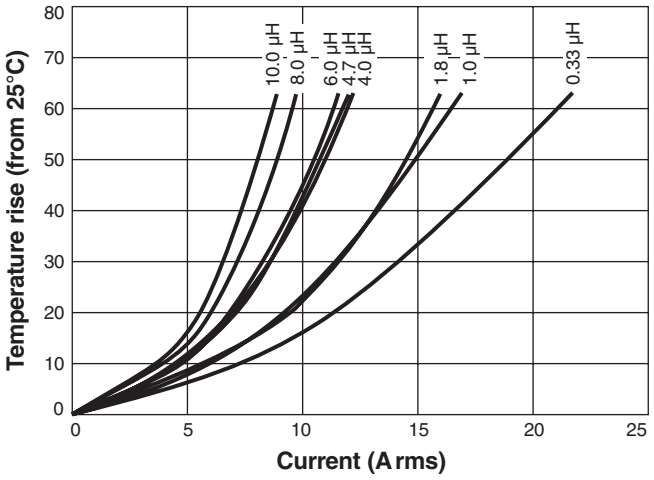
Typical L vs Frequency

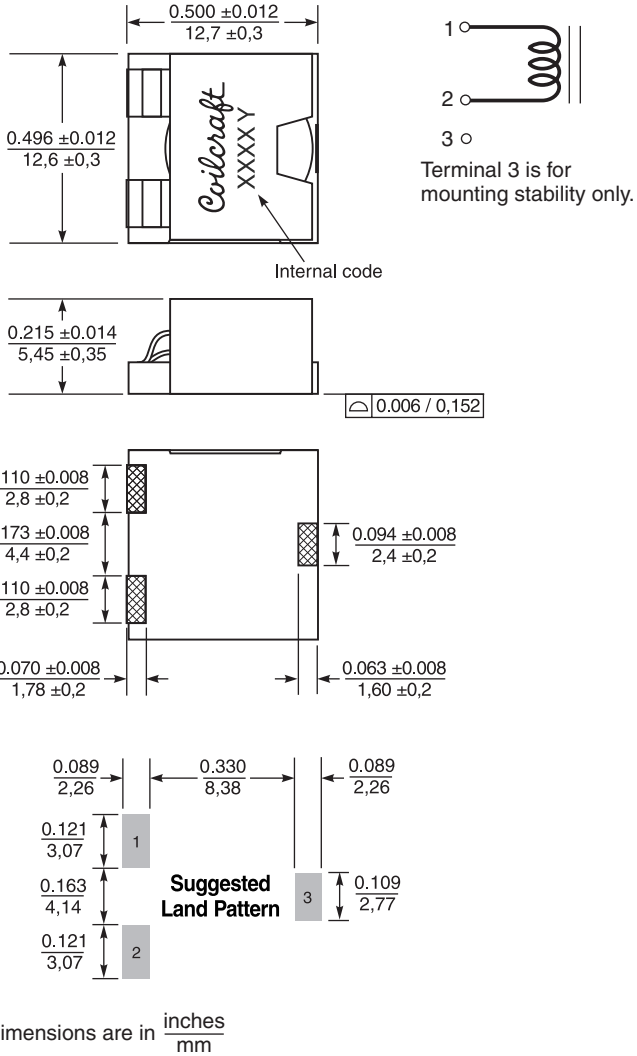


Typical L vs Current



Temperature Rise vs Current





Dimensions are in inches / mm

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Document ST290-2 Revised 08/17/22