

RF & MICROWAVE CAPACITORS

Multilayer ceramic "Porcelain" - Lasertrim®

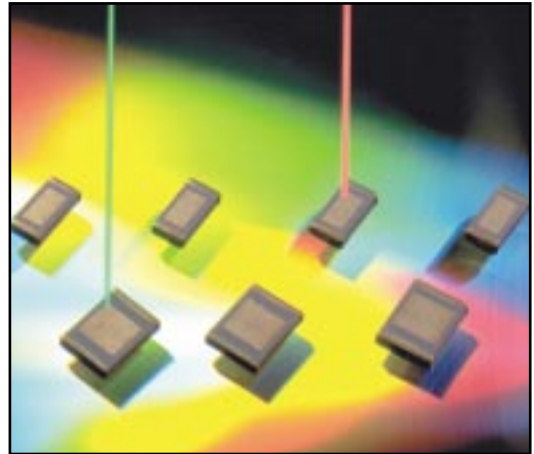
LASER TRIM® CERAMIC CHIP CAPACITORS

Applications

Laser-Trim®, tuning capacitors are laser adjustable monolithic ceramic surface mount devices for precise functional tuning of R.F. circuits.

Laser-Trim® have the high reliability expected of conventional multi-layer chip capacitors and do not experience capacitance drift, flux entrapment and other reliability concerns associated with conventional trimmers.

These capacitors exhibit excellent post-trim "Q" and "ESR" performances at frequencies of 100 - 2000 MHz. Proposed in standard sizes 0603, 0805, 1206 and 1210 with nickel-barrier terminations and tape and reel packaging, Laser-Trim® are compatible with high volume S.M.T auto-placement and reflow techniques.



They are ideally suited for functional tuning applications in oscillator, filter and antenna circuits in a variety of products mostly dealing with wireless R.F such as:

- Pagers
- Transceivers
- Remote control
- Cellular communications
- R.F Modems
- Digital RF products
- etc.

Major advantages

- Ease of functional tuning process automation
- High resolution, high accuracy tuning capability
- High stability and reliability after adjustment
- Reduced component placement & tuning cost
- Standard & small component size
- Non-interactive tuning process, no trim tool to affect the performance of the R.F circuits
- Capability to trim inside electro-magnetic shields through very small access holes.

Electrical characteristics

Temperature coefficient	:	0 ± 30 ppm (achieved with 3 dielectric constant: C, L, N.)
Quality factor	:	See enclosed curves
Insulation resistance	:	100 seconds or 10 GΩ @ 50 V, 25° C
Rated voltage	:	50 V dc
Voltage proof	:	2.5 x Ur (50 mA max. -5 ± 1 sec)
Test parameters	:	1 MHz (± 5 %) -1 ± 0.2 Vrms

Laser-Trim® is a trade-mark Johanson Dielectrics Inc.

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LASER-TRIM® RANGE 1206 & 1210 sizes

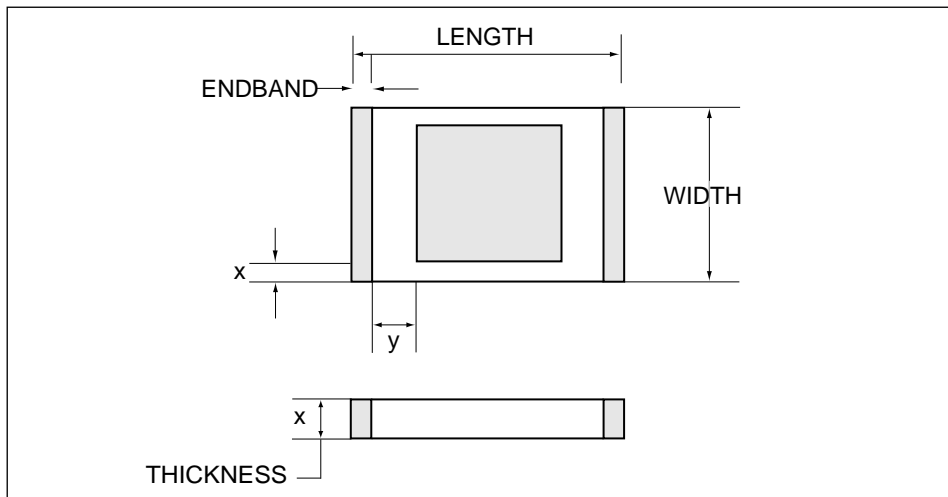
Part number	Size	Pre-trim minimum capacitance	Tuning range	Pre-trim "Q" @ 200 MHz (minimum)	Pre-trim "Q" @ 900 MHz (minimum)
500L18C2R0XG	1206	2.0 pF	2.0 - 0.5 pF	600	100
500L18L4R0XG	1206	4.0 pF	4.0 - 0.8 pF	350	50
500L18L6R5XG	1206	6.5 pF	6.5 - 1.2 pF	300	40
500L41C2R5XG	1210	2.5 pF	2.5 - 0.5 pF	600	125
500L41C4R5XG	1210	4.5 pF	4.5 - 1.0 pF	400	75
500L41L120XG	1210	12 pF	12.0 - 2.5 pF	200	25
500L41N210XG	1210	21 pF	21.0 - 3.0 pF	90	...

- Notes: 1 - The temperature coefficient is 0 ± 30 ppm for all types.
 2 - Pre-trim minimum capacitance has a standard tolerance of: + 25 % / - 0 %.

Dimensions

Size	1206 (L18) mm	1206 (L18) inch	1210 (L41) mm	1210 (L41) inch
Length	3.09 ± 0.2	0.122 ± 0.008	3.30 ± 0.2	0.130 ± 0.008
Width	1.52 ± 0.2	0.060 ± 0.008	2.54 ± 0.2	0.100 ± 0.008
Thickness	0.63 ± 0.13	0.025 ± 0.005	0.63 ± 0.13	0.025 ± 0.005
Endband	0.13 min.	0.005 min.	0.13 min.	0.005 min.
Space "x" & "y"	0.10 min.	0.004 min.	0.10 min.	0.004 min.

LASER-TRIM® Adjustable Ceramic chip capacitor



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How to order?

