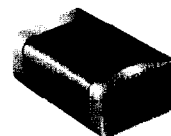


INDUCTORS

Multilayer Chip



MLR SERIES - High Frequency

TDK's MLR Series Inductors are low inductance value components designed for high frequency applications. MLR inductors exhibit high Q at high frequency. The MLR inductors are packaged in miniature case sizes. These inductors are constructed from highly reliable ceramic materials using TDK's unique multilayer manufacturing processes. The high self-resonant frequency of these inductors is ideal for high frequency applications—including cellular phones, pagers, personal digital assistants, automotive electronics, keyless remote, radar detectors, computer communications, etc.

Electrical Specifications

Inductance Range	Tolerances
2.2nH to 4.7 nH	$\pm 0.3\text{nH}$
5.6nH to 8.2nH	$\pm 0.5\text{nH}$
10.0nH to 100.0nH	$\pm 5\%$

Solderability

Nickel barrier terminations are standard on the MLR series. The parts are designed for both wave and reflow solder applications.

Environmental Characteristics

Operating Temperature Range

-40°C to +125°C

Part Number Configuration

MLR	1608	-	10N	J
(1)	(2)	(3)	(4)	

(1) Series name

(2) Case size (see size chart)

(3) Inductance

(4) Tolerance

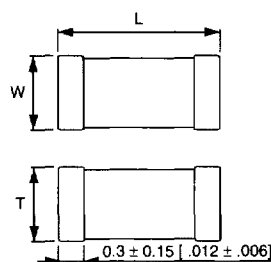
S: $\pm 0.3\text{nH}$
D: $\pm 0.5\text{nH}$
J: $\pm 5\%$

Marking

The MLR Series Inductors are marketed with an "orientation" mark. This insures that the inductors are tested and packaged consistently. If the inductors are used in high frequency applications, the inductors should be consistently oriented on the PCB to eliminate any performance variation due to stray capacitance.

Packaging style

Taping ($\phi 178$ mm [7.008 inches] reel)



INDUCTORS

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MLR SERIES - High Frequency

Size Chart Inches (mm)

Type	Length	Width	Thickness	Termination
1608	0.063 (1.6)	0.031 (0.8)	0.037 (0.95)	Ni Barrier-Tin Plated

Packaging

Taping	Qty./reel
Embossed	4,000

MLR1608 TYPE

Electrical Characteristics

TDK Manufacturing Part Number	Inductance (nH)	Q Min 100MHz	Q Typical				SRF Min (MHz)	DC Resistance (Ω) Max.	Rated DC Current (mA) Max.
			100MHz	300MHz	500MHz	1000MHz			
MLR1608M2N2S	2.2 \pm 0.3nH	8	20	37	46	78	3000	0.2	500
MLR1608M2N7S	2.7 \pm 0.3nH	8	14	28	37	56	3000	0.2	500
MLR1608M3N3S	3.3 \pm 0.3nH	8	12	25	32	46	3000	0.2	500
MLR1608M3N9S	3.9 \pm 0.3nH	8	12	21	26	36	3000	0.2	500
MLR1608M4N7S	4.7 \pm 0.3nH	8	12	21	26	36	3000	0.2	500
MLR1608M5N6D	5.6 \pm 0.5nH	8	12	20	25	36	2500	0.3	500
MLR1608M6N8D	6.8 \pm 0.5nH	8	12	20	25	35	2500	0.3	500
MLR1608M8N2D	8.2 \pm 0.5nH	8	12	20	24	35	2500	0.3	500
MLR1608M10NJ	10.0 \pm 5%	8	12	19	24	28	2200	0.5	300
MLR1608M12NJ	12.0 \pm 5%	8	12	19	24	28	2000	0.5	300
MLR1608M15NJ	15.0 \pm 5%	8	12	17	22	24	1800	0.6	300
MLR1608M18NJ	18.0 \pm 5%	8	12	17	20	23	1700	0.6	300
MLR1608M22NJ	22.0 \pm 5%	8	12	19	22	21	1500	0.6	300
MLR1608M27NJ	27.0 \pm 5%	8	12	19	23	20	1300	0.8	300
MLR1608M33NJ	33.0 \pm 5%	8	12	22	24	14	1100	0.8	300
MLR1608M39NJ	39.0 \pm 5%	8	12	23	26	13	1000	0.8	300
MLR1608M47NJ	47.0 \pm 5%	8	12	21	20	—	800	1.0	200
MLR1608M56NJ	56.0 \pm 5%	8	12	17	15	—	800	1.0	200
MLR1608M68NJ	68.0 \pm 5%	8	12	16	13	—	600	1.0	200
MLR1608M82NJ	82.0 \pm 5%	8	12	15	11	—	500	1.0	200
MLR1608MR10J	100.0 \pm 5%	8	12	15	10	—	500	1.0	200