

# Chip Inductors New LTE RF Chokes



- Inductance range 56 – 330 nH ideally suited for Low Frequency Filter applications
- Inductance range 150 – 900 nH developed for RF Isolation Circuits (420 – 900 nH optimized for 700 MHz LTE Band)
- Ferrite construction for high current handling

Part number <sup>1</sup>	Inductance <sup>2</sup> ±5% (nH)	Impedance typ (Ohms)		SRF typ <sup>3</sup> (MHz)	DCR max <sup>4</sup> (Ohms)	Irms <sup>5</sup> (mA)
		900 MHz	1.7 GHz			
RA7294-AE_	56	260	475	2200	0.061	1200
RA7295-AE_	77	350	580	2050	0.072	1100
RA7296-AE_	120	515	900	2000	0.090	950
RA7297-AE_	150	700	1170	1800	0.130	830
RA7298-AE_	160	800	1600	1450	0.210	700
RA7299-AE_	220	1100	2050	1560	0.240	600
RA7300-AE_	330	2100	2750	1340	0.435	430
RA7301-AE_	420	2175	3350	1100	0.510	400
RA7302-AE_	530	3950	3050	1000	0.715	330
RA7303-AE_	590	4770	3090	960	0.780	320
RA7304-AE_	770	4900	1800	585	1.35	220
RA7305-AE_	900	7130	4470	760	1.50	230

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

**RA7305-AEW**

**Packaging:** W = 7" machine-ready reel. EIA-481 punched paper tape (2000 parts per full reel).

U = Less than full reel. In tape, but not machine ready. To have a leader and trailer added (\$25 charge), use code letter W instead.

- Inductance measured at 7.9 MHz using a Coilcraft SMD-F test fixture and Coilcraft-provided correlation pieces with an Agilent/HP 4286 impedance analyzer.
- SRF measured using Agilent/HP 8753D network analyzer and Coilcraft SMD-D test fixture.
- DCR measured on Cambridge Technology micro-ohmmeter and a Coilcraft CCF858 test fixture.
- Current that causes a 15°C temperature rise from 25°C ambient. Because of their open construction, these parts will not saturate. Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

**Core material** Ferrite

**Environmental** RoHS compliant without exemption, halogen free

**Terminations** RoHS compliant matte tin over nickel over silver-platinum-glass frit.

**Weight** 0.9 – 1.1 mg

**Ambient temperature** –40°C to +85°C with Irms current, +85°C to +100°C with derated current

**Storage temperature** Component: –40°C to +100°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

**Temperature Coefficient of Inductance (TCL)** +25 to +150 ppm/°C

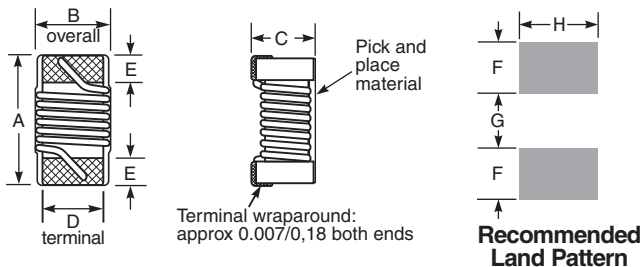
**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**

One per billion hours / one billion hours, calculated per Telcordia SR-332

**Packaging** 2000 per 7" reel. Paper tape: 8 mm wide, 0.68 mm thick, 2 mm pocket spacing

**PCB washing** Tested with pure water or alcohol only. For other solvents, see Doc787\_PCB\_Washing.pdf



A max	B max	C max	D	E	F	G	H
0.044	0.024	0.026	0.018	0.009	0.017	0.022	0.026
1,12	0,61	0,66	0,46	0,23	0,43	0,56	0,66



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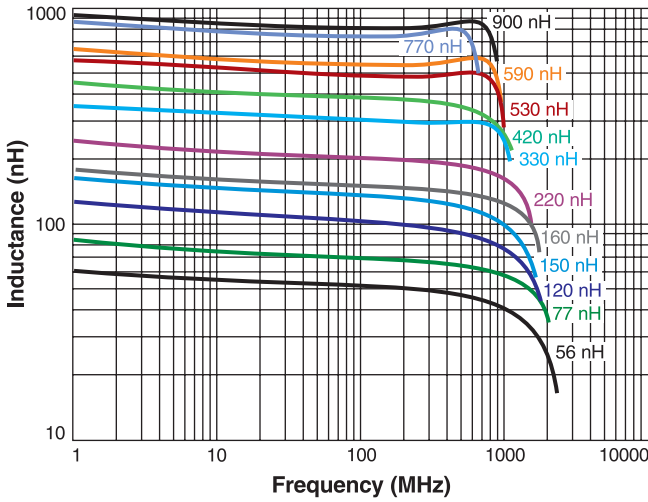
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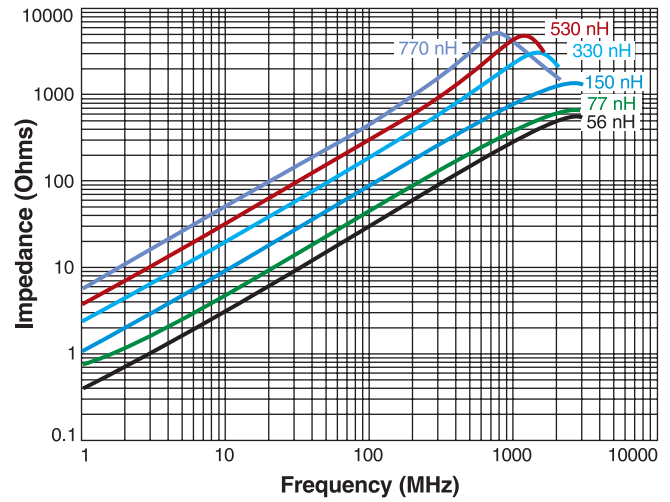


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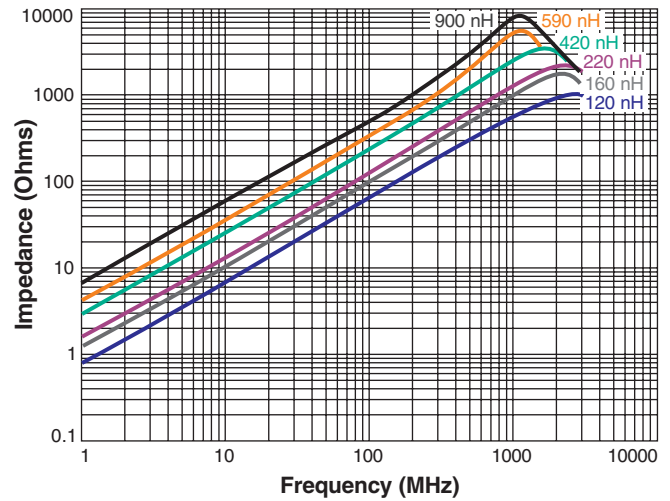
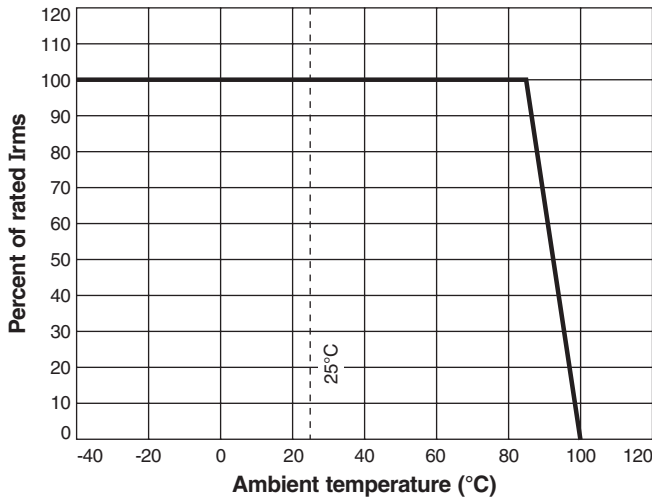
## Typical L vs Frequency



## Typical Z vs Frequency



## Irms Derating



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