

# High Temp Power Inductors MSS7341T



- Designed for high ambient temperatures – up to 125°C
- AEC-Q200 Grade 1 qualified
- Low DCR and excellent current handling

**Core material** Ferrite

**Core and winding loss** See [www.coilcraft.com/coreloss](http://www.coilcraft.com/coreloss)

**Environment** RoHS compliant

**Terminations** RoHS compliant matte tin over nickel over phos bronze. Other terminations available at additional cost.

**Weight:** 0.61 – 0.67 g

**Ambient temperature** –40°C to +125°C with (40°C rise) Irms current.

**Maximum part temperature** +165°C (ambient + temp rise). [Derating](#).

**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)

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

38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

**Packaging** 300/7 reel; 1200/13" reel; Plastic tape: 16 mm wide, 0.35 mm thick, 12 mm pocket spacing, 4.5 mm pocket depth

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

Part number <sup>1</sup>	Inductance <sup>2</sup> (µH)	Percent tolerance <sup>3</sup>	DCR (Ohms)		SRF typ <sup>4</sup> (MHz)	Isat (A) <sup>5</sup>			Irms (A) <sup>6</sup>	
			typ	max		10% drop	20% drop	30% drop	20°C rise	40°C rise
MSS7341T-332_L_	3.3	<b>30</b> ,20	0.014	0.018	85	2.8	3.4	3.7	3.95	5.00
MSS7341T-502_L_	5.0	<b>30</b> ,20	0.018	0.023	49	2.4	2.8	3.1	3.40	4.70
MSS7341T-622_L_	6.2	<b>30</b> ,20	0.024	0.027	42	2.1	2.5	2.7	3.05	4.30
MSS7341T-742_L_	7.4	<b>30</b> ,20	0.027	0.031	35	2.0	2.3	2.6	2.80	4.10
MSS7341T-872_L_	8.7	<b>30</b> ,20	0.029	0.034	33	1.8	2.1	2.3	2.80	3.90
MSS7341T-103ML_	10	<b>20</b>	0.032	0.038	32	1.7	2.0	2.2	2.80	3.80
MSS7341T-123ML_	12	<b>20</b>	0.040	0.050	27	1.6	1.8	2.0	2.45	3.30
MSS7341T-153ML_	15	<b>20</b>	0.047	0.055	26	1.4	1.7	1.8	2.05	3.00
MSS7341T-183ML_	18	<b>20</b>	0.065	0.075	25	1.3	1.5	1.6	1.85	2.65
MSS7341T-223ML_	22	<b>20</b>	0.074	0.082	22	1.2	1.4	1.5	1.70	2.35
MSS7341T-273ML_	27	<b>20</b>	0.091	0.109	19	1.0	1.2	1.3	1.50	2.10
MSS7341T-333ML_	33	<b>20</b>	0.104	0.124	17	0.94	1.1	1.2	1.50	1.95
MSS7341T-393ML_	39	<b>20</b>	0.115	0.130	15	0.86	1.0	1.1	1.50	1.90
MSS7341T-473ML_	47	<b>20</b>	0.127	0.155	14	0.80	0.95	1.0	1.50	1.85
MSS7341T-563ML_	56	<b>20</b>	0.174	0.202	11	0.72	0.86	0.94	1.25	1.60
MSS7341T-683ML_	68	<b>20</b>	0.236	0.250	9.6	0.64	0.76	0.83	1.00	1.35
MSS7341T-823ML_	82	<b>20</b>	0.257	0.290	8.5	0.57	0.68	0.74	1.00	1.25
MSS7341T-104ML_	100	<b>20</b>	0.286	0.310	7.2	0.54	0.64	0.70	0.90	1.15
MSS7341T-154ML_	150	<b>20</b>	0.438	0.475	6.0	0.45	0.53	0.58	0.86	1.14
MSS7341T-224ML_	220	<b>20</b>	0.660	0.710	5.0	0.39	0.47	0.51	0.57	0.78
MSS7341T-474KL_	470	<b>10</b>	1.21	1.45	3.0	0.27	0.32	0.35	0.43	0.57
MSS7341T-684KL_	680	<b>10</b>	1.85	1.98	2.5	0.20	0.25	0.27	0.42	0.56

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

MSS7341T-872NLD

**Tolerance:** M = 20%, N = 30% (Table shows stock tolerances in bold.)

**Termination:** L = RoHS compliant matte tin over nickel over phos bronze.  
**Special order:** T = RoHS tin-silver-copper (95.5/4/0.5) over gold over nickel over phos bronze or  
 S = non-RoHS tin-lead (63/37) over gold over nickel over phos bronze.

**Packaging:** D = 13" machine-ready reel. EIA-481 embossed plastic tape (1200 parts per full reel).

C = 7" machine-ready reel. EIA-481 embossed plastic tape. Special order (300 parts per full reel).

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

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc using a Coilcraft SMD-A fixture in an Agilent/HP 4263B LCR meter.

3. Tolerances shown in bold are stocked for immediate shipment.

4. SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.

5. DC current at 25°C that causes the specified inductance drop from its value without current. [Click for temperature derating information](#).

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. [Click for temperature derating information](#).

7. Electrical specifications at 25°C.

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



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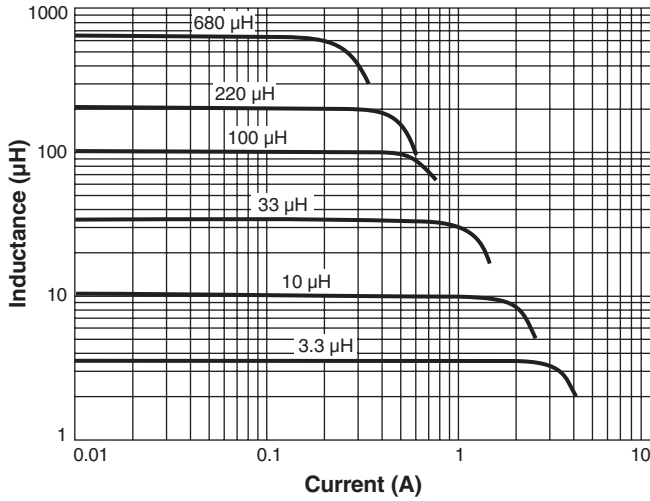
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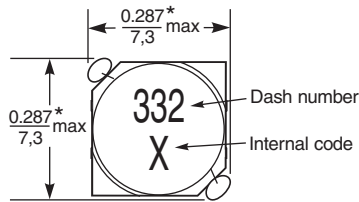
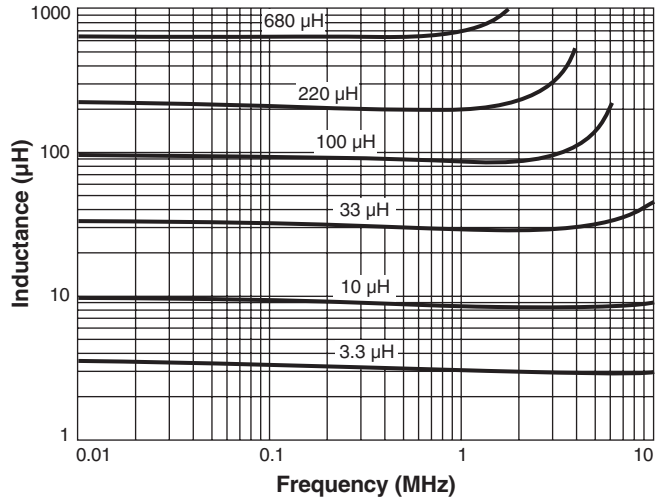
# HIGH TEMPERATURE

## High Temperature Power Inductors – MSS7341T Series

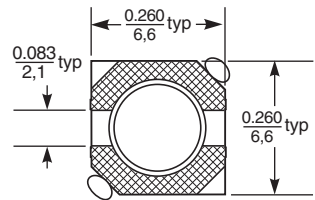
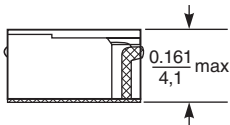
### Typical L vs Current



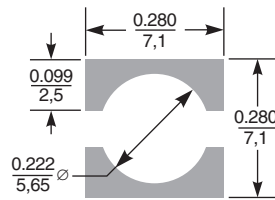
### Typical L vs Frequency



\*Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.02 in / 0,51 mm.



#### Recommended Land Pattern



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

