

High-Reliability Power Inductors MS563PKA



- High temperature materials allow operation in ambient temperatures up to 155°C.
- Tin-lead (Sn-Pb) soldered self-leaded construction for excellent solderability.
- Very low DCR values and excellent current handling

Core material Ferrite

Terminations Tin-lead (63/37) over copper

Weight 0.95 – 1.25 g

Ambient temperature –55°C to +105°C with Irms current

Maximum part temperature +155°C (ambient + temp rise).

Storage temperature Component: –55°C to +155°C.

Packaging: –55°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)

Enhanced crush-resistant packaging 750 per 13" reel

Plastic tape: 24 mm wide, 0.35 mm thick, 12 mm pocket spacing, 6.4 mm pocket depth

Part number ¹	Inductance ² ±20% (µH)	DCR (mOhm)		SRF (MHz) ³		Isat (A) ⁴			Irms (A) ⁵	
		typ	max	min	typ	10% drop	20% drop	30% drop	20°C rise	40°C rise
MS563PKA301MSZ	0.3	2.6	3.0	200	238	14.0	16.0	17.0	8.0	12.0
MS563PKA901MSZ	0.9	5.1	6.0	122	153	8.6	10.2	10.9	6.1	8.8
MS563PKA122MSZ	1.2	5.1	7.0	100	125	7.0	8.4	9.3	3.4	5.6
MS563PKA182MSZ	1.8	7.7	9.0	86	108	6.2	7.4	8.1	3.2	5.0
MS563PKA222MSZ	2.2	6.8	10	74	92	6.0	6.7	7.2	2.9	4.5
MS563PKA272MSZ	2.7	9.4	11	63	79	5.1	6.0	6.4	2.7	4.2
MS563PKA332MSZ	3.3	11.1	13	57	71	4.7	5.5	6.0	2.4	4.0
MS563PKA392MSZ	3.9	15.3	18	54	68	4.3	5.2	5.5	2.4	4.0
MS563PKA472MSZ	4.7	20.4	24	46	57	4.0	4.4	4.8	2.4	3.7
MS563PKA562MSZ	5.6	21.3	25	43	53	3.6	4.1	4.4	2.2	3.3
MS563PKA682MSZ	6.8	25.5	30	38	48	3.3	3.7	4.0	2.2	3.3
MS563PKA822MSZ	8.2	29.8	35	35	44	2.9	3.4	3.7	2.2	3.2
MS563PKA103MSZ	10	32.3	38	30	38	2.7	3.1	3.4	2.1	3.1
MS563PKA123MSZ	12	40.8	48	26	33	2.5	2.9	3.1	1.7	2.7
MS563PKA153MSZ	15	49.3	58	25	31	2.2	2.5	2.8	1.9	2.6
MS563PKA183MSZ	18	59.5	70	21	27	2.1	2.4	2.6	1.9	2.5
MS563PKA223MSZ	22	72.3	85	20	25	1.9	2.1	2.3	1.8	2.4
MS563PKA273MSZ	27	85	100	19	24	1.7	1.9	2.1	1.3	1.9
MS563PKA333MSZ	33	109	128	16	20	1.5	1.7	1.9	1.3	1.8
MS563PKA393MSZ	39	116	136	14	18	1.3	1.5	1.7	1.3	1.8
MS563PKA473MSZ	47	146	172	12	15	1.2	1.4	1.5	1.1	1.5
MS563PKA563MSZ	56	170	200	11	14	1.1	1.3	1.4	0.9	1.3
MS563PKA683MSZ	68	221	260	10	13	0.85	1.2	1.3	0.82	1.2
MS563PKA823MSZ	82	264	310	9.5	12	0.82	1.1	1.2	0.81	1.2
MS563PKA104MSZ	100	306	360	8.3	10	0.80	0.96	1.1	0.80	1.1
MS563PKA124MSZ	120	384	452	8.3	10	0.70	0.85	0.98	0.68	0.90
MS563PKA154MSZ	150	432	508	7.0	8.7	0.65	0.80	0.86	0.63	0.87
MS563PKA184MSZ	180	525	618	6.0	7.5	0.62	0.70	0.80	0.54	0.76
MS563PKA224MSZ	220	618	727	5.3	6.6	0.50	0.70	0.65	0.53	0.73
MS563PKA274MSZ	270	819	963	4.6	5.8	0.44	0.54	0.62	0.43	0.62
MS563PKA334MSZ	330	935	1100	4.4	5.5	0.42	0.48	0.58	0.41	0.57
MS563PKA394MSZ	390	1105	1300	3.9	4.8	0.41	0.46	0.53	0.38	0.53
MS563PKA474MSZ	470	1360	1600	3.6	4.3	0.35	0.44	0.48	0.34	0.47

1. When ordering, specify **testing** code:

MS563PKA474MSZ

Testing: Z = Unscreened

H = Group A screening per
Coilcraft CP-SA-10001

G = Coilcraft CP-SA-10001
Group A (SLDC Option A)

D = Coilcraft CP-SA-10001
Group A (SLDC Option B)

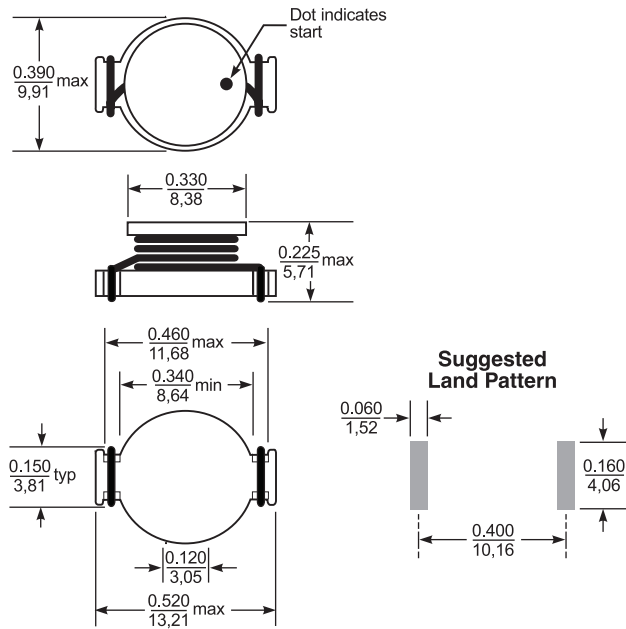
N = Group A screening per
Coilcraft CP-SA-10004

All screening performed to
the document's latest revision

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4263B LCR meter or equivalent.
3. SRF measured using Agilent/HP 8753D network analyzer or equivalent.
4. DC current at 25°C that causes the specified inductance drop from its value without current.
5. Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.
6. Electrical specifications at 25°C. Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

Coilcraft CPS
CRITICAL PRODUCTS & SERVICES

MS563PKA Series (3316)



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