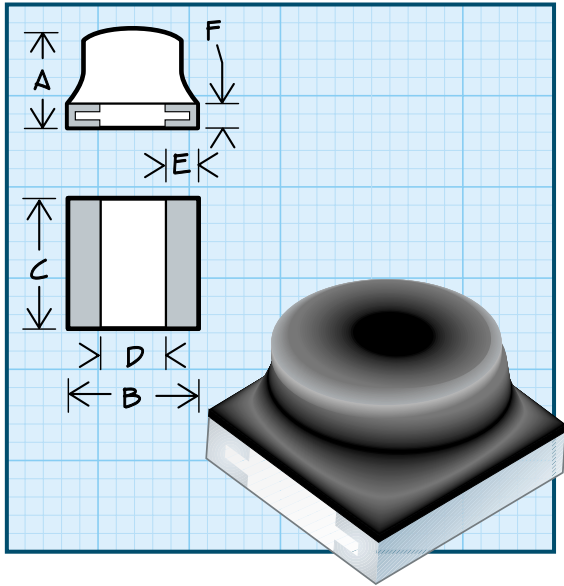


# Series 103

## Micro i<sup>®</sup> Chip Inductors



### Physical Parameters

	Inches	Millimeters
A	0.075 Max.	1.91 Max.
B	0.100 ± 0.010	2.54 ± 0.25
C	0.100 ± 0.010	2.54 ± 0.25
D	0.050 Min.	1.27 Min.
E	0.015 Min. (Typ.)	0.38 Min. (Typ.)
F	0.020 Max. (Typ.)	0.51 Max. (Typ.)

**Weight Max.** (Grams) 0.03

**Current Rating at 90°C Ambient** 35°C Rise

**Operating Temperature Range** -55°C to +125°C

**Maximum Power Dissipation at 90°C** 0.135 Watts

**Termination Finish Options** (Part # Code)

Gold over Nickel (Standard): As shown.

Tin/Lead over Nickel: Add suffix "S" to part # (e.g., 103-102KS).

Mil type "A:" Gold over Nickel (Standard)

Mil type "B" or "F:" Tin/Lead (solder) over Nickel.

### Mechanical Configuration

Units are epoxy encapsulated.

Contact areas for reflow soldering are gold plated per MIL-G-45204 Type 1-Grade A. Internal connections are thermal compression bonded.

**Packaging** Tape & reel (8mm): 7" reel, 2000 pieces max.; 13" reel, 8000 pieces max.

**Military Specifications** MIL-PRF-83446/4

*Made In the U.S.A.*

PART NUMBER MIL DASH # INDUCTANCE (µH) see Note 3 TOLERANCE Q MINIMUM TEST FREQUENCY (MHz) SRF MINIMUM (MHz) DC RESISTANCE MAXIMUM (OHMS) CURRENT RATING MAX. (mA)

M83446/4- SERIES 103 PHENOLIC CORE								
103-100(*)	30/37	0.010	± (*)	60	50.0	2700	0.060	1270
103-120K	38	0.012	± 10%	57	50.0	2450	0.069	1190
103-150(*)	31/39	0.015	± (*)	55	50.0	2200	0.078	1110
103-180K	40	0.018	± 10%	52	50.0	2000	0.093	1030
103-220(*)	32/41	0.022	± (*)	50	50.0	1800	0.108	950
103-270K	42	0.027	± 10%	49	50.0	1625	0.114	925
103-330(*)	33/43	0.033	± (*)	48	50.0	1450	0.120	900
103-390K	44	0.039	± 10%	45	50.0	1335	0.133	860
103-470(*)	34/45	0.047	± (*)	42	50.0	1220	0.145	820
103-560K	46	0.056	± 10%	39	50.0	1110	0.170	760
103-680(*)	35/47	0.068	± (*)	36	50.0	1000	0.195	705
103-820K	48	0.082	± 10%	34	50.0	915	0.212	675
103-101(*)	36/49	0.100	± (*)	32	50.0	830	0.230	650
M83446/4- SERIES 103 FERRITE CORE								
103-121K	01	0.12	± 10%	30	25.0	750	0.125	880
103-151K	02	0.15	± 10%	25	25.0	650	0.175	745
103-181K	03	0.18	± 10%	25	25.0	550	0.200	695
103-221K	04	0.22	± 10%	25	25.0	450	0.220	665
103-271K	05	0.27	± 10%	25	25.0	375	0.230	650
103-331K	06	0.33	± 10%	25	25.0	300	0.235	645
103-391K	07	0.39	± 10%	22	25.0	235	0.240	635
103-471K	08	0.47	± 10%	22	25.0	215	0.260	610
103-561K	09	0.56	± 10%	22	25.0	195	0.278	590
103-681K	10	0.68	± 10%	22	25.0	175	0.520	435
103-821K	11	0.82	± 10%	22	25.0	160	0.530	430
103-102K	12	1.0	± 10%	22	25.0	145	0.540	425
103-122K	13	1.2	± 10%	22	7.9	130	0.740	360
103-152K	14	1.5	± 10%	22	7.9	115	0.840	340
103-182K	15	1.8	± 10%	22	7.9	105	0.920	325
103-222K	16	2.2	± 10%	22	7.9	85	1.00	310
103-272K	17	2.7	± 10%	24	7.9	77	1.15	290
103-332K	18	3.3	± 10%	24	7.9	70	1.40	260
103-392K	19	3.9	± 10%	24	7.9	68	1.55	250
103-472K	20	4.7	± 10%	24	7.9	60	1.80	230
103-562K	21	5.6	± 10%	22	7.9	55	2.00	220
103-682K	22	6.8	± 10%	22	7.9	50	2.20	210
103-822K	23	8.2	± 10%	22	7.9	48	2.50	195
103-103K	24	10.0	± 10%	24	7.9	40	3.45	165
103-123K	25	12.0	± 10%	25	2.5	35	3.80	160
103-153K	26	15.0	± 10%	25	2.5	30	5.60	135
103-183K	27	18.0	± 10%	25	2.5	28	5.80	130
103-223K	28	22.0	± 10%	25	2.5	25	6.40	125
103-273K	29	27.0	± 10%	25	2.5	22	6.90	120

Parts listed above are QPL/MIL qualified

**Notes** 1) Designed specifically for reflow soldering and other high temperature processes with metalized edges to exhibit solder fillet.

2) Self Resonant Frequency (SRF) Values above 250 MHz are calculated and for reference only. 3) (\*) - MS slash numbers available in 20% (Suffix "M") and 10% (Suffix "K") tolerances.

RF INDUCTORS