



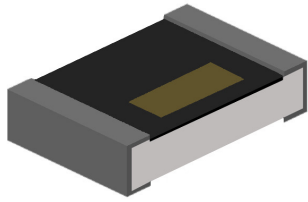
Thin Film Inductor Catalog

DARFON
Darfon Electronics Corp.

Content

Thin Film Chip Inductor (IT series).....	2
Features	2
Applications	2
ORDERING CODE	2
Construction & Dimensions.....	3
Standard Electrical Specifications.....	4
TESTING CONDITION AND REQUIREMENTS	5
PACKAGING SPECIFICATIONS	6

Thin Film Chip Inductor (IT series)



Features

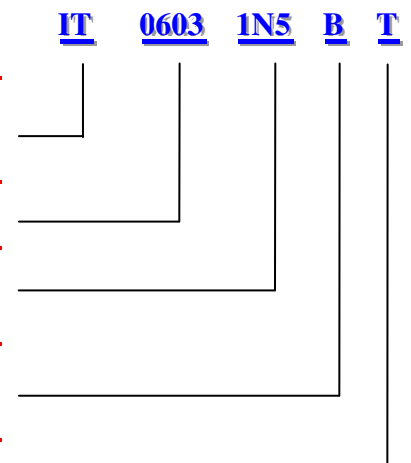
- Photolithographic single layer ceramic chip
- High SRF, excellent Q, superior temperature stability
- Tight tolerance of $\pm 1\%$ or $\pm 0.1\text{nH}$
- Self resonant frequency controlled within 10%
- Stable inductance in high frequency circuit
- Highly stable design for critical needs

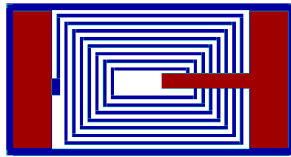
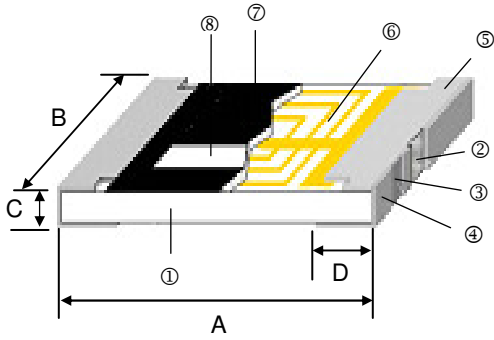
Applications

- Cellular Telephone, Pagers and GPS Products
- VCO, TCXO Circuit and RF Transceiver Module
- Wireless LAN, Bluetooth Module, Communication Appliances

ORDERING CODE

PRODUCT CODE	IT : Thin-Film High Frequency Chip Inductor (Lead Free)	
DIMENSION CODE (EIA CODE)	0603 (0201)	
INDUCTANCE CODE	1N5 = 1.5 nH 15N = 15 nH R15 = 150 nH	
INDUCTANCE TOLERANCE CODE	B= +/- 0.1 nH C = +/- 0.2 nH S = +/- 0.3 nH	G = +/- 2% H= +/- 3% J= +/- 5%
PACKAGING CODE	B = Bulk T = Tape	





① Alumina Substrate	④ External Electrode (Sn)	⑦ Overcoat
② Inner Electrode (Ni-Cr)	⑤ Edge Electrode	⑧ Marking
③ Barrier Layer (Ni)	⑥ Cu Circuits	

Unit: mm

Type	Size (Inch)	A	B	C	D	Weight(g) (1000pcs)
IT0603	0201	0.60±0.05	0.30±0.05	0.23±0.05	0.15±0.05	0.3

Standard Electrical Specifications

Ordering Code	Inductance	Available Tolerance	Q	L,Q Measureing Frequency	DC Resistance (Ω)	Rated Current (mA)	Self Resonant Frequency	Packing Amount
	(nH)		Min	(MHz)	Max.	Max.	(GHz) Min.	Pcs
IT06030N7BT	0.7	± 0.1 nH	8	500	0.20	400	9	10,000
IT06030N8BT	0.8	± 0.1 nH	8	500	0.20	400	9	
IT06030N9BT	0.9	± 0.1 nH	8	500	0.20	400	9	
IT06031N0BT	1.0	± 0.1 nH	8	500	0.25	350	9	
IT06031N1BT	1.1	± 0.1 nH	8	500	0.25	350	9	
IT06031N2BT	1.2	± 0.1 nH	8	500	0.25	350	9	
IT06031N3BT	1.3	± 0.1 nH	8	500	0.30	300	9	
IT06031N4BT	1.4	± 0.1 nH	8	500	0.30	300	9	
IT06031N5BT	1.5	± 0.1 nH	8	500	0.30	300	9	
IT06031N6BT	1.6	± 0.1 nH	8	500	0.30	300	9	
IT06031N7BT	1.7	± 0.1 nH	8	500	0.35	300	9	
IT06031N8BT	1.8	± 0.1 nH	8	500	0.35	300	9	
IT06031N9BT	1.9	± 0.1 nH	8	500	0.45	250	9	
IT06032N0BT	2.0	± 0.1 nH	8	500	0.45	250	9	
IT06032N1BT	2.1	± 0.1 nH	8	500	0.45	250	9	
IT06032N2BT	2.2	± 0.1 nH	8	500	0.55	200	9	
IT06032N3BT	2.3	± 0.1 nH	8	500	0.55	200	9	
IT06032N4BT	2.4	± 0.1 nH	8	500	0.55	200	9	
IT06032N5BT	2.5	± 0.1 nH	8	500	0.55	200	9	
IT06032N6BT	2.6	± 0.1 nH	8	500	0.70	200	8	
IT06032N7BT	2.7	± 0.1 nH	8	500	0.70	200	8	
IT06032N8BT	2.8	± 0.1 nH	8	500	0.70	200	8	
IT06032N9BT	2.9	± 0.1 nH	8	500	0.80	150	8	
IT06033N0BT	3.0	± 0.1 nH	8	500	0.80	150	8	
IT06033N1BT	3.1	± 0.1 nH	8	500	0.80	150	8	
IT06033N2BT	3.2	± 0.1 nH	8	500	0.80	150	8	
IT06033N3BT	3.3	± 0.1 nH	8	500	0.80	150	8	
IT06033N4BT	3.4	± 0.1 nH	8	500	1.00	150	6	
IT06033N5BT	3.5	± 0.1 nH	8	500	1.00	150	6	
IT06033N6BT	3.6	± 0.1 nH	8	500	1.00	150	6	
IT06033N7BT	3.7	± 0.1 nH	8	500	1.00	150	6	
IT06033N8BT	3.8	± 0.1 nH	8	500	1.00	150	6	
IT06033N9BT	3.9	± 0.1 nH	8	500	1.00	150	6	
IT06034N3BT	4.3	± 0.1 nH	8	500	1.20	150	6	
IT06034N7BT	4.7	± 0.1 nH	8	500	1.20	150	6	
IT06035N1BT	5.1	± 0.1 nH	8	500	1.30	140	6	
IT06035N6GT	5.6	$\pm 2\%$	8	500	1.60	130	6	
IT06036N8GT	6.8	$\pm 2\%$	8	500	2.00	120	4	
IT06038N2GT	8.2	$\pm 2\%$	8	500	2.80	110	4	
IT060310NGT	10.0	$\pm 2\%$	8	500	3.25	100	2	

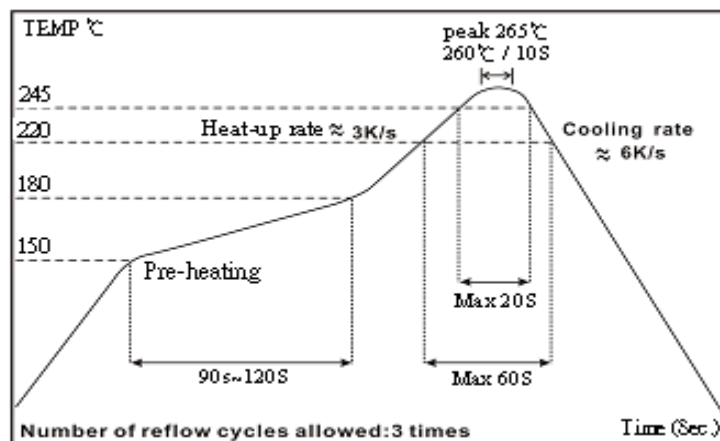
**□ Tolerance: B= ± 0.1 nH, C= ± 0.2 nH, S= ± 0.3 nH, G= $\pm 2\%$, J= $\pm 5\%$

TESTING CONDITION AND REQUIREMENTS

Item	Test Method	Requirement
Inductance	Measuring equipment and fixture: 0201: HP4287+Agilent 16196C	As Spec.
Insulation Resistance	MIL-STD-202F Method 302 Apply 100V _{DC} for 1minute	>1000MΩ
Damp Heat with Load	MIL-STD-202F Method 103B 40±2°C, 90~95% R.H. Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"	ΔL ≤ 10%
Bending Strength	JIS-C-5201-1 6.1.4 Bending Amplitude 3mm for 10 seconds	As Spec.
Solderability	MIL-STD-202F Method 208H 245±5°C for 3 seconds	95% min. coverage
Resistance to Soldering Heat	MIL-STD-202F Method 210E 260±5°C for 10 seconds	ΔL ≤ 10%
Dielectric Withstand Voltage	MIL-STD-202F Method 301 Apply 100VA (rms) for 1minute	>100V
High Temperature Exposure	JIS-C-5201-1 7.2 85±2°C, 1000 +48/-0 hours	ΔL ≤ 10%
Low Temperature Storage	JIS-C-5201-1 7.1 -40±3°C, 1000 +48/-0 hours	ΔL ≤ 10%
Temperature Cycle	JIS-C-5201-1 7.4 -40/RT/85/RT, 10 cycles	ΔL ≤ 10%

■ Storage Temperature: 25±3°C; Humidity < 80%RH

◆ Reflow



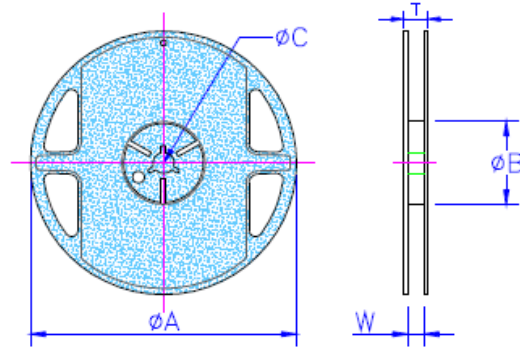
DARFON

PACKAGING SPECIFICATIONS

REVISION : IT1104

PAGE : 6 OF 20

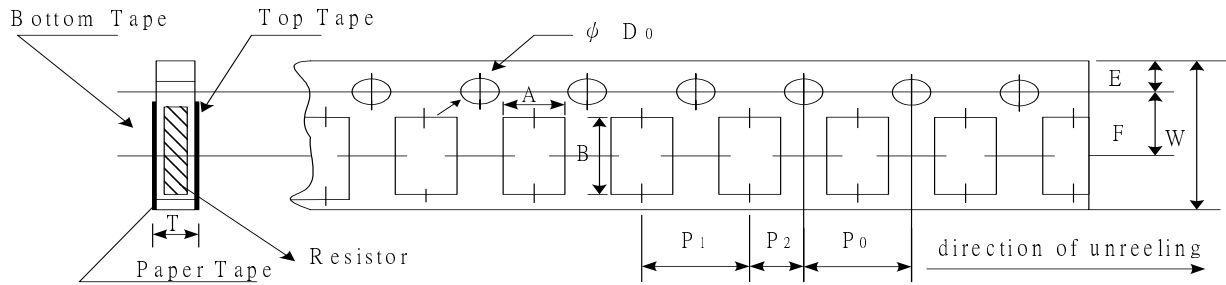
Reel Specifications & Packaging Quantity



Unit: mm

Type	ϕA	ϕB	ϕC	W	T	Quantity (EA)
IT0603	178±1.0	60.0±1.0	13.5±0.70	9.5±1.0	11.5±1.0	10,000

Paper Tape Specifications



Unit: mm

Type	A	B	W	E	F	P0	P1	P2	ψD_0	T
IT0603	0.40±0.05	0.70±0.05	8.00±0.10	1.75±0.05	3.50±0.05	4.00±0.10	2.00±0.05	2.00±0.05	1.55±0.03	0.42±0.02

Remark : Test Method

Test direction : bar mark faces left