SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Shielded Inductor	ABC'S DWG NO.	FR1013□□□□L□-□□□		
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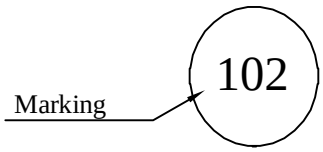
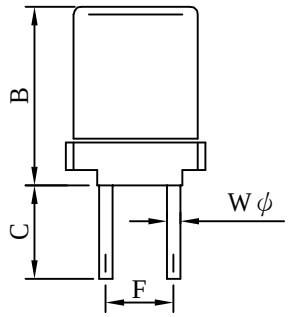
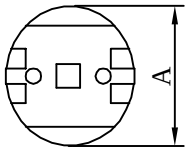
Ⅰ．Configuration and dimensions：







Unit：m/m

A	B	C	F	Wϕ
10.00 ±0.5	13.00 ±0.5	5.00 ±2.0	5.00 ±0.5	0.70 ±0.05

Ⅱ．Description：

a．Ferrite POT core construction.

b．Enamelled copper wire：F class

c．Product weight： 2.30g（ref.）

d．Moisture sensitivity Level 1

e．Products comply with RoHS' requirements

f．Halogen free available

Ⅲ．General specification：

a．Storage temp.：-40℃ ～ +125℃

b．Operaing temp.：-40℃ ～ +125℃

(Temp. rise included.)

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Ⅳ . Electrical characteristics：

DWG No.	Inductance (mH)	Q min.	Test Freq. (Hz)		SRF (KHz) min.	RDC (Ω) max.	IDC (mA) max.
			L	Q			
FR1013102KL□-□□□	1.0 ±10%	40	1K	252.0K	740	4.0	150
FR1013122KL□-□□□	1.2 ±10%	40	1K	252.0K	670	5.0	140
FR1013152KL□-□□□	1.5 ±10%	40	1K	252.0K	500	6.0	130
FR1013182KL□-□□□	1.8 ±10%	40	1K	252.0K	480	7.0	115
FR1013222KL□-□□□	2.2 ±10%	40	1K	252.0K	410	10.0	100
FR1013272KL□-□□□	2.7 ±10%	40	1K	252.0K	390	11.0	95
FR1013332KL□-□□□	3.3 ±10%	30	1K	252.0K	350	12.0	85
FR1013392KL□-□□□	3.9 ±10%	30	1K	252.0K	340	13.0	80
FR1013472KL□-□□□	4.7 ±10%	30	1K	252.0K	320	23.0	70
FR1013562KL□-□□□	5.6 ±10%	30	1K	252.0K	310	25.0	65
FR1013682KL□-□□□	6.8 ±10%	20	1K	252.0K	280	30.0	60
FR1013822KL□-□□□	8.2 ±10%	20	1K	252.0K	260	32.0	50
FR1013103KL□-□□□	10.0 ±10%	50	1K	79.6K	240	35.0	45
FR1013123KL□-□□□	12.0 ±10%	50	1K	79.6K	210	50.0	40
FR1013153KL□-□□□	15.0 ±10%	50	1K	79.6K	190	58.0	38
FR1013183KL□-□□□	18.0 ±10%	50	1K	79.6K	180	63.0	35
FR1013223KL□-□□□	22.0 ±10%	40	1K	79.6K	140	90.0	30
FR1013273KL□-□□□	27.0 ±10%	40	1K	79.6K	130	100.0	28
FR1013333KL□-□□□	33.0 ±10%	40	1K	79.6K	125	115.0	25
FR1013393KL□-□□□	39.0 ±10%	30	1K	79.6K	120	185.0	23
FR1013473KL□-□□□	47.0 ±10%	30	1K	79.6K	110	205.0	22

1). Electrical specifications at 25℃

2). IDC base on Temp. rise 20℃ max.

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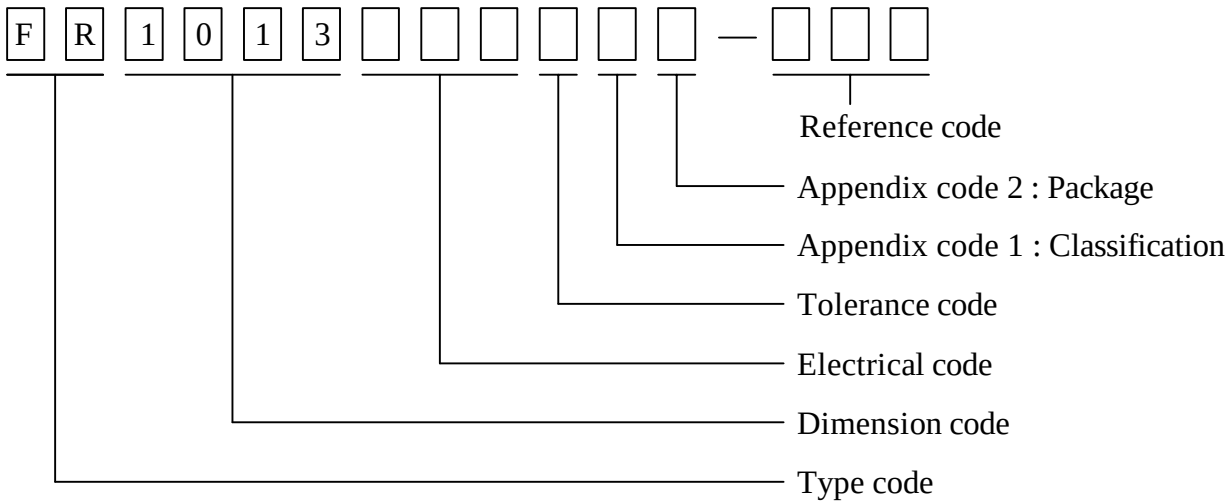
V ．Dwging number expression：



Appendix code 1：Product Classification

L：Lead Free Standard products comply with RoHS' requirements

Appendix code 2：Package Information

Code	Inner package	Inner package Q'TY	Remark
A	Tray	110 pcs	

千如電子集團
ABC ELECTRONICS GROUP

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Ⅵ . Reliability test：

Item	Reference documents	Test Condition	Test Specification
1.High Temperature Exposure	MIL-STD-202 Method 108	1.Temperature: 125℃ 2.Time:96 hours.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
2.Temperature Cycling	JESD22 Method JA-104	1.Temperature: -40℃ ~ 125℃ 2.Number of cycle:96 cycle 3.Dwell time:30 minutes	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
3.Biased Humidity Test	MIL-STD-202 Method 103	1.Temperature: 85±5 ℃ 2.Time:96 Hours 3.Humidity: 85±5% RH.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
4.Operational Life	MIL-PRF-27	1.Temperature: 125℃ 2.Time:96 hours. 3.Apply rated current.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
5.Exeternal Visual	MIL-STD-883 Method 2009	Inspect product constructions, marking and workmanship.	1.No pollution on the surface of products. 2.Clear marking. 3.No crack.
6.Physical Dimensions	JESD22 Method JB-100	Verify physical dimensions to the applicable product detail specification.	Per product specification standard
7.Resistance to solvents	MIL-STD-202 Method 215	Immerse into solvent for 3±0.5 minutes & brush 10 times for therr cycles.	1.No body change in apperarance. 2.No marking blurred. 3.Inductance shall not change more than ±10%.
8.Vibration Test	MIL-STD-202 Method 204	1.Frequency and Amplitued : 10-2000-10 Hz, 1.5 mm. 2.Direction:X, Y, Z 3.Test duration:2 hours for each direction, 6 hours in total.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
9.Resistance To Soldering Heat Test	MIL-STD-202 Method 210	1.Method：Dip 2.Temperature：260±5 3.Time（temp.≧ 260℃）：10 second. 4.Number of times：3 times.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
10.Rated current	MIL-STD-202 Method 330	Apply rated current for 5 second.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
11.Temperature rise	MIL-PRF-27	Apply rated current for 10 minutes.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
12.Over load	MIL-PRF-27	Apply twice as rated current for 5 minutes. (It's not application to some special design)	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
13.Solderability Test	J-STD-002	Dip pads in flux then dip in solder pot at 240±5 for 5 senconds.	Teminals area must have 95% min. Solder coverage.
14.Electrical Characteriazation	User Spec.	1.Operating temperature： -40℃~125℃ 2.Room temperature：25℃.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
15.Withstanding Voltage Test	MIL-STD-202 Method 201	1.DV:500V 2.Time:1minutes	1.During the test no breakdown. 2.The characteristic is normal after test.
16.Drop	JESD22-B111	Packaged & Drop down from 1m.In 1 angle 1ridges & 2 surfaces orientation.	1.No case deformation or change in appearance. 2.Inductance shall not change more than ±10%.
17.Terminal Strength Test	JIS-C-6429	1.Apply push force to samples mounted on PCB. 2.Force of 1.8 kg for 60±1 seconds.	After test, inductors shall be no mechanical damage.