Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065
TEL: (805) 522-9998 FAX: (805) 522-9989
E-mail: frontiersales@frontierusa.com
Web: http://www.frontierusa.com

SMD Thin Film (Ceramic) Chip Inductors—0402TF series

A. Electrical specifications:

Part No.	L (nH)	Tolerance (% or nH)	Q (Min)	SRF (min) (GHz)	DCR (Ω) (Max)	I rms. (mA)
0402TFN20	0.2	B, C, S	13/500MHz	14	0.10	800
0402TFN40	0.4	B, C, S	13/500MHz	14	0.10	800
0402TFN80	0.8	B, C, S	13/500MHz	14	0.15	700
0402TF1N0	1.0	B, C, S	13/500MHz	12	0.15	700
0402TF1N2	1.2	B, C, S	13/500MHz	12	0.15	700
0402TF1N5	1.5	B, C, S	13/500MHz	10	0.25	700
0402TF1N6	1.6	B, C, S	13/500MHz	10	0.25	560
0402TF1N6	1.8	B, C, S	13/500MHz	10	0.25	560
0402TF2N0	2.0	B, C, S	13/500MHz	8.0	0.35	560
0402TF2N2	2.2	B, C, S	13/500MHz	8.0	0.35	440
0402TF2N5	2.5	B, C, S	13/500MHz	8.0	0.35	440
0402TF2N7	2.7	B, C, S	13/500MHz	8.0	0.35	440
0402TF3N1	3.1	B, C, S	13/500MHz	6.0	0.45	380
0402TF3N3	3.3	B, C, S	13/500MHz	6.0	0.45	380
0402TF3N6	3.6	B, C, S	13/500MHz	6.0	0.55	380
0402TF3N9	3.9	B, C, S	13/500MHz	6.0	0.55	340
0402TF4N7	4.7	B, C, S	13/500MHz	6.0	0.65	320
0402TF5N6	5.6	B, C, S	13/500MHz	6.0	0.85	280
0402TF5N9	5.9	B, C, S	13/500MHz	6.0	0.85	280
0402TF6N8	6.8	B, C, S	13/500MHz	6.0.	1.05	260
0402TF7N2	7.2	B, C, S	13/500MHz	6.0	1.05	260
0402TF8N0	8.0	B, C, S	13/500MHz	5.5	1.25	220
0402TF8N2	8.2	B, C, S	13/500MHz	5.5	1.25	220
0402TF9N1	9.1	B, C, S	13/500MHz	5.5	1.25	220
0402TF10N	10.0	J, H, G, F	13/500MHz	4.5	1.35	200
0402TF12N	12.0	J, H, G, F	13/500MHz	3.7	1.55	180
0402TF13N8	13.8	J, H, G, F	13/500MHz	3.7	1.75	180
0402TF15N	15.0	J, H, G, F	13/500MHz	3.3	1.75	130
0402TF17N	17.0	J, H, G, F	13/500MHz	3.1	1.95	100
0402TF18N	18.0	J, H, G, F	13/500MHz	3.1	2.15	100
0402TF20N8	20.8	J, H, G, F	13/500MHz	2.8	2.55	90
0402TF22N	22.0	J, H, G, F	13/500MHz	2.8	2.65	90
0402TF27N	27.0	J, H, G, F	13/500MHz	2.5	3.25	75
0402TF33N	33.0	J	13/500MHz	2.5	4.50	75

Parts are **RoHS** compliant.

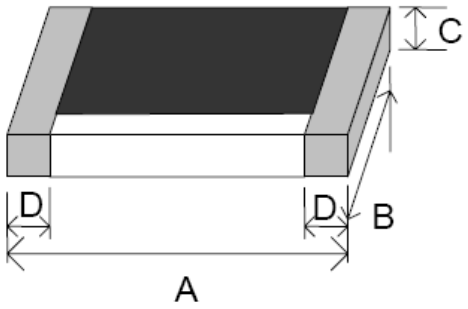
Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065
TEL: (805) 522-9998 FAX: (805) 522-9989
E-mail: frontiersales@frontierusa.com
Web: http://www.frontierusa.com

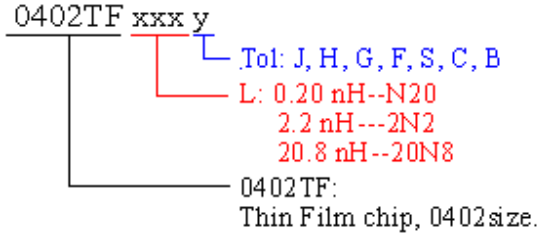
SMD Thin Film (Ceramic) Chip Inductors—0402TF series

B. Mechanical Dimensions: (Unit: mm)

SERIES	A	B	C	D
0402TF	1.0 ± 0.05	0.5 ± 0.05	0.32 ± 0.05	0.20 ± 0.10



C. Part Number:



D. General information:

1. Tolerance: J: ± 5%, H: ± 3%, G: ± 2%, F: ± 1%. And B: ± 0.1nH, C: ± 0.2nH, S: ±0.3nH.
2. A Photo Lithographic Single Layer Ceramic Chip.
3. High SRF, Excellent Q, Superior Temperature Stability
4. Tight Tolerance of ± 1% or ± 0.1nH
5. Stable Inductance in High Frequency Circuit
6. For 15ºC Temperature Rise at 25ºC ambient.
7. Inductance & Q measured using the HP4286A and Agilent 16196B.
8. SRF measured using the HP8720D or HP8753E.
9. DCR measured using the 502BC.
10. Operating temperature: -40°C TO +125ºC.
11. Storage Temperature: 25ºC ± 3ºC; Humidity < 80%RH
12. Inductance Range:
    - 0402TF (thin Film) Series: 0.20nH (800mA)~33.0nH(75mA). SRF from 14GHz to 2.5GHz.
13. **RoHS** compliant.

D. Applications:

✳ Cellular-phone, Pagers and GPS Products.
✳ VCO, TCXO Circuit and RF Transceiver Module.
✳ Wireless LAN, Bluetooth Module, Communication Appliances Hybrid.

★ ***Special specifications are available for customer's requirement.***

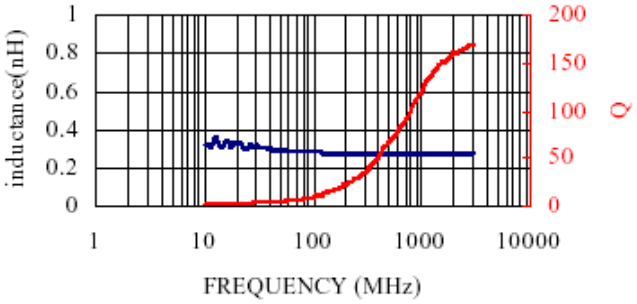
Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065
TEL: (805) 522-9998 FAX: (805) 522-9989
E-mail: frontiersales@frontierusa.com
Web: http://www.frontierusa.com

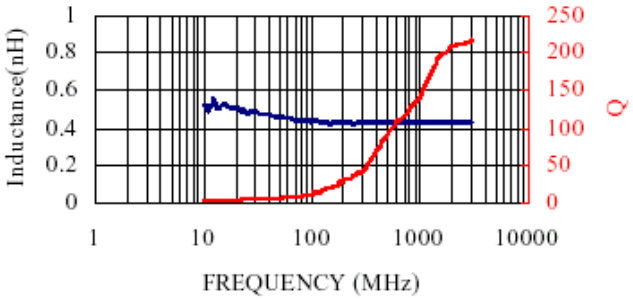
SMD Thin Film (Ceramic) Chip Inductors—0402TF series

E. Characteristic curve:

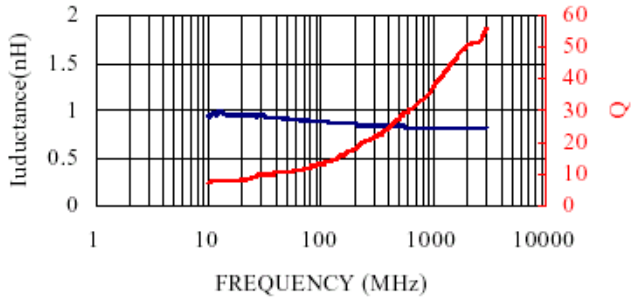
0402TFN20B



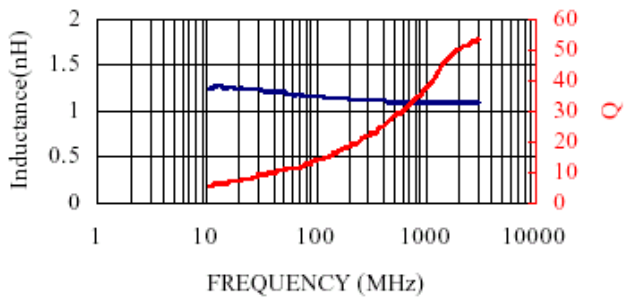
0402TFN40B



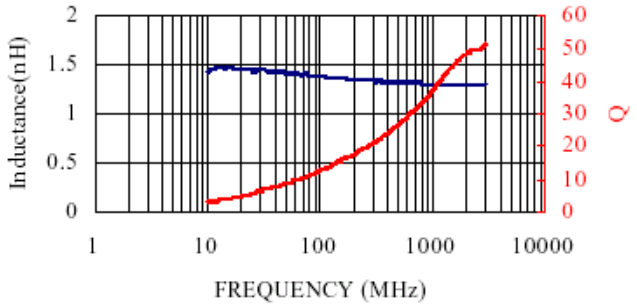
0402TFN80B



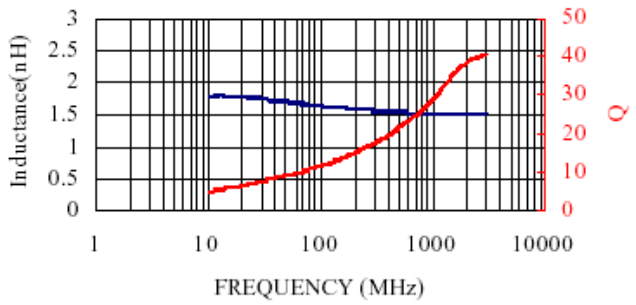
0402TF1N0B



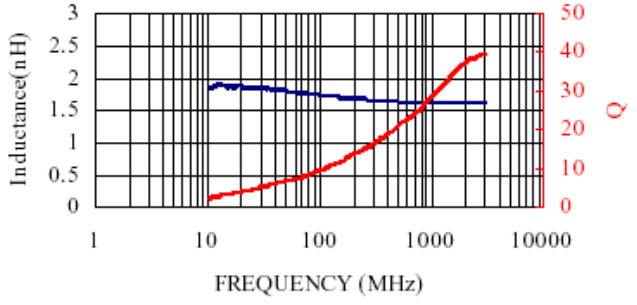
0402TF1N2B



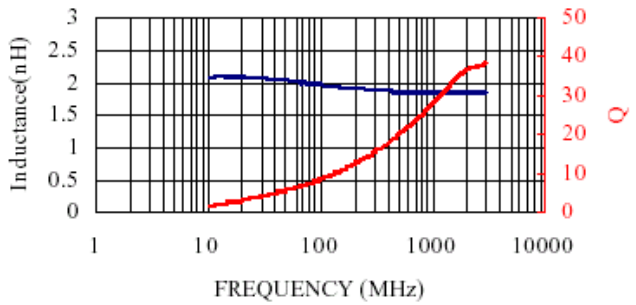
0402TF1N5B



0402TF1N6B



0402TF1N8B



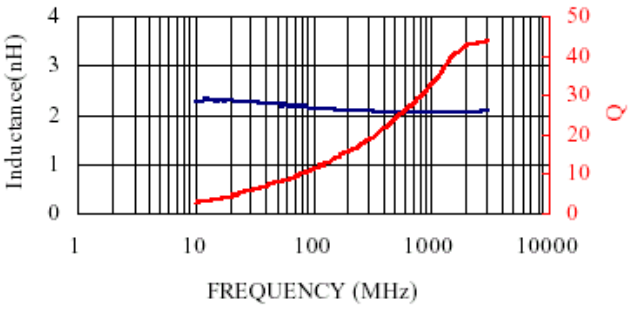
Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065
TEL: (805) 522-9998 FAX: (805) 522-9989
E-mail: frontiersales@frontierusa.com
Web: http://www.frontierusa.com

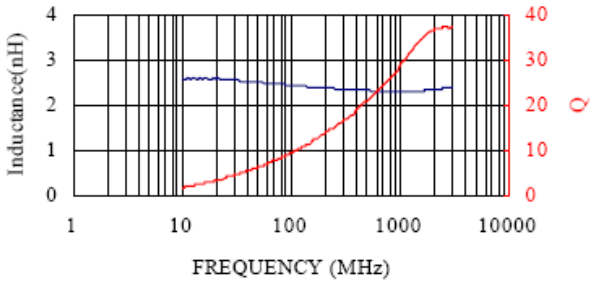
SMD Thin Film (Ceramic) Chip Inductors—0402TF series

E. Characteristic curve:

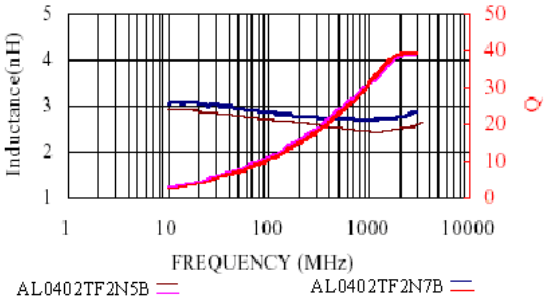
0402TF2N0B



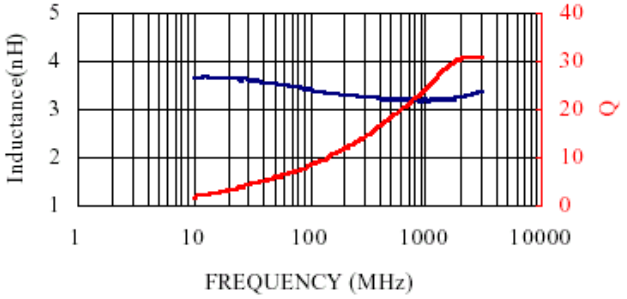
0402TF2N2B



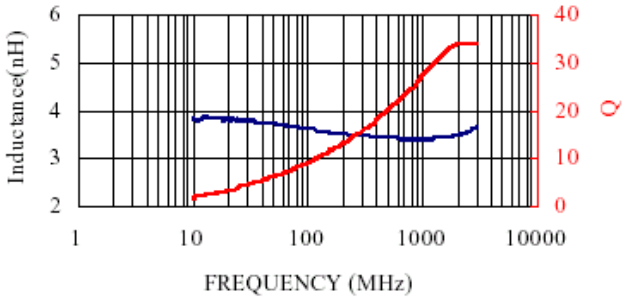
0402TF2N5B / 0402TF2N7B



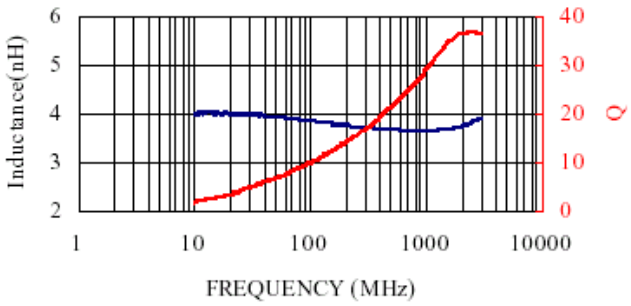
0402TF3N1B



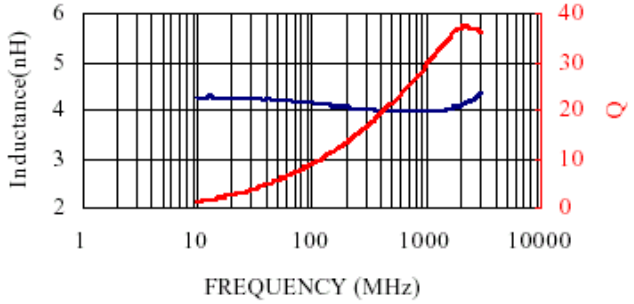
0402TF3N3B



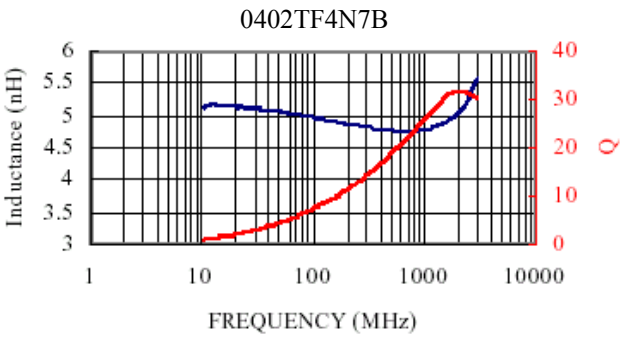
0402TF3N6B



0402TF3N9B



0402TF4N7B



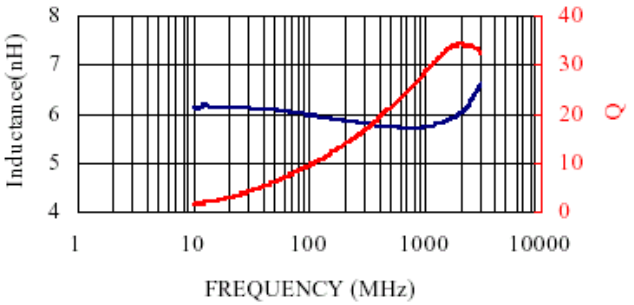
Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065
TEL: (805) 522-9998 FAX: (805) 522-9989
E-mail: frontiersales@frontierusa.com
Web: http://www.frontierusa.com

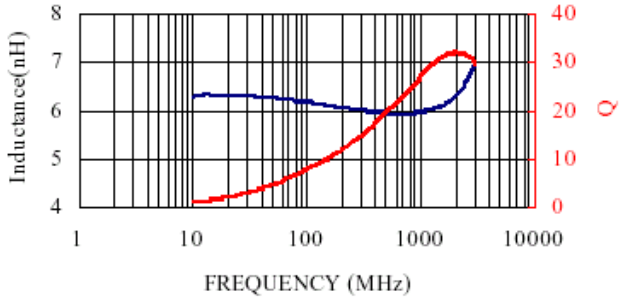
SMD Thin Film (Ceramic) Chip Inductors—0402TF series

E. Characteristic curve:

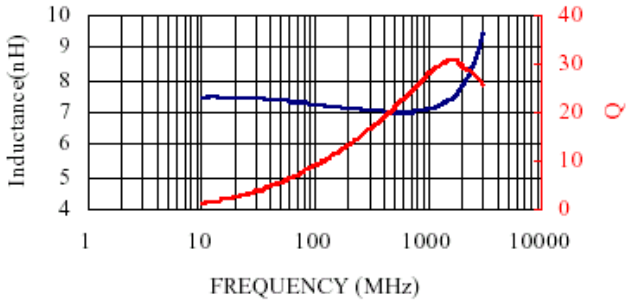
0402TF5N6B



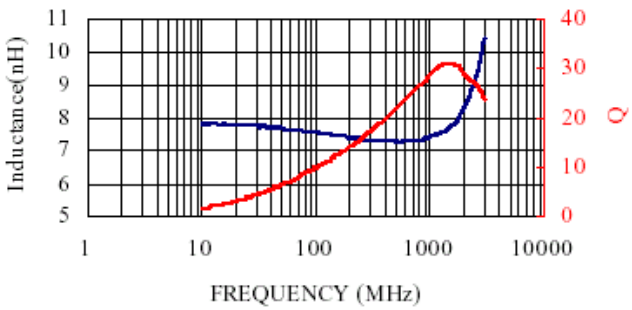
0402TF5N9B



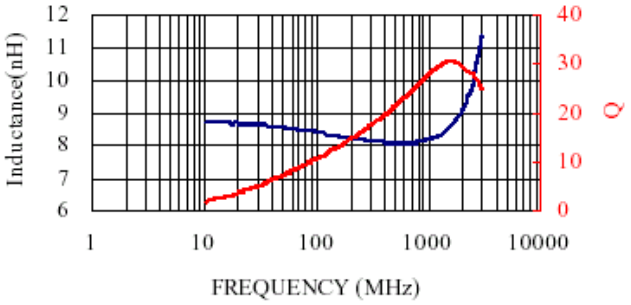
0402TF6N8B



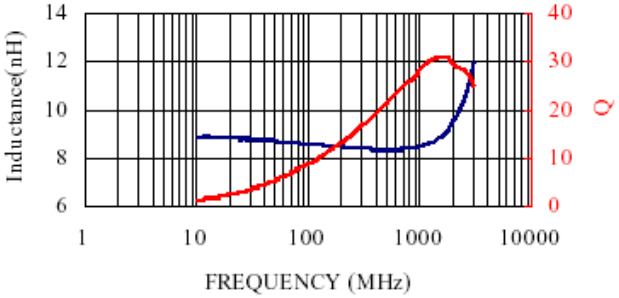
0402TF7N2B



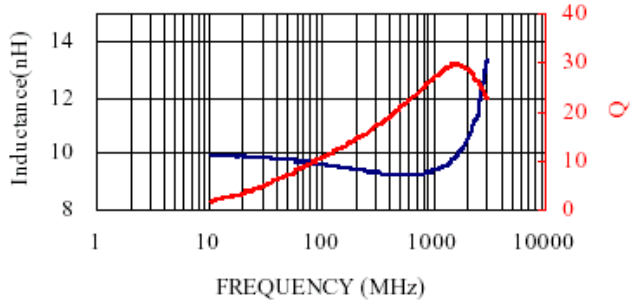
0402TF8N0B



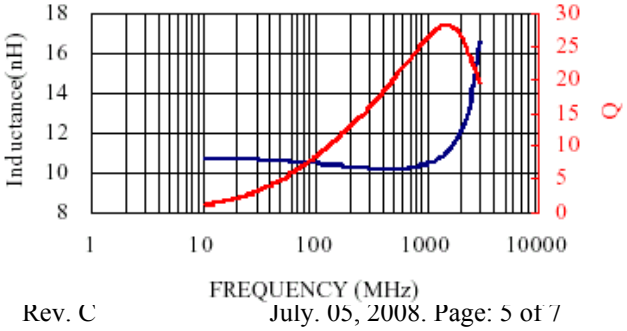
0402TF8N2B



0402TF9N1B



0402TF10NG



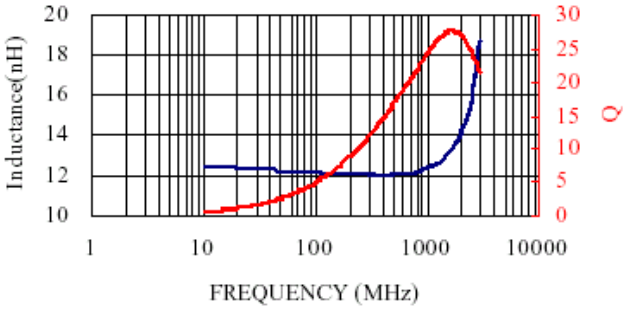
Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065
TEL: (805) 522-9998 FAX: (805) 522-9989
E-mail: frontiersales@frontierusa.com
Web: http://www.frontierusa.com

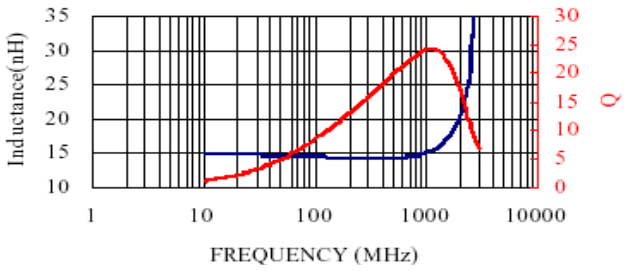
SMD Thin Film (Ceramic) Chip Inductors—0402TF series

E. Characteristic curve:

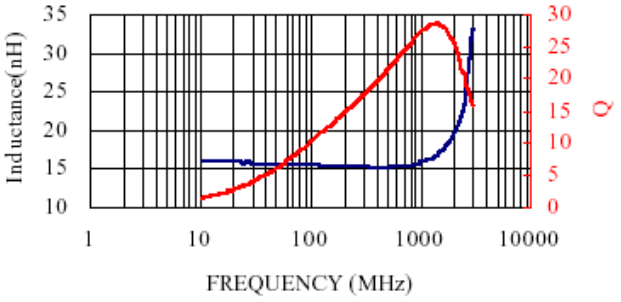
0402TF12NG



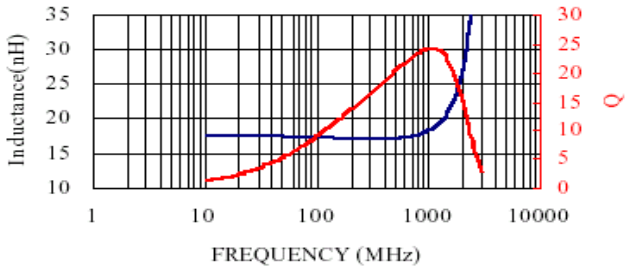
0402TF13N8G



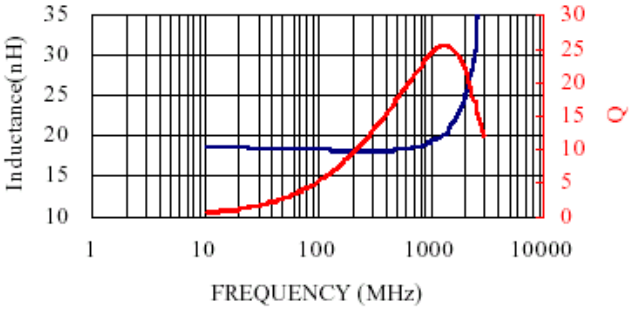
0402TF15NG



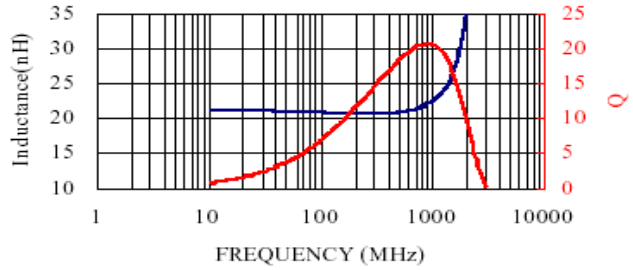
0402TF17NG



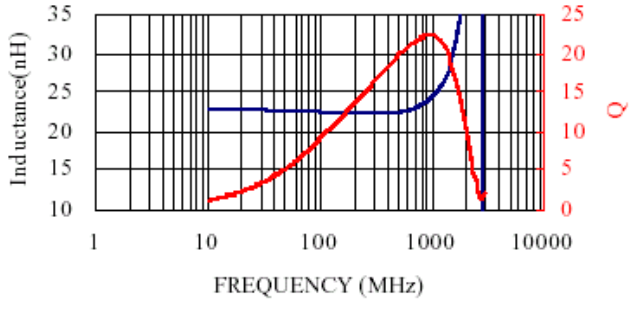
0402TF18NG



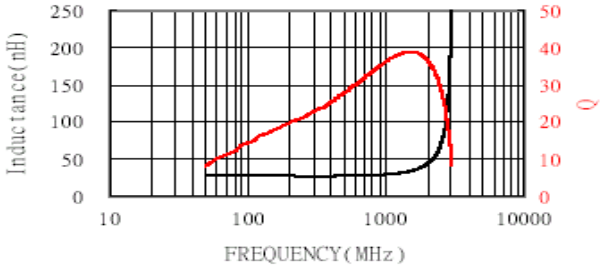
0402TF20N8G



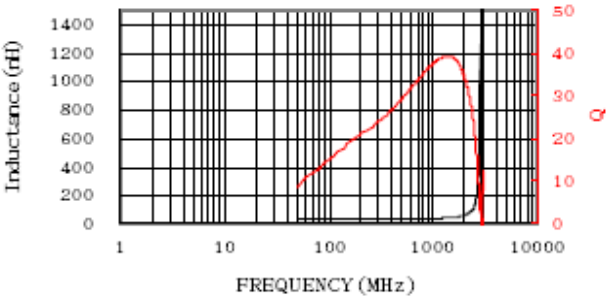
0402TF22NG



0402TF27NG



0402TF33NJ



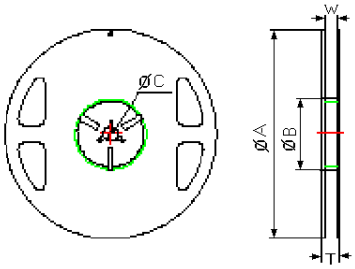
Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065
TEL: (805) 522-9998 FAX: (805) 522-9989
E-mail: frontiersales@frontierusa.com
Web: http://www.frontierusa.com

SMD Thin Film (Ceramic) Chip Inductors—0402TF series

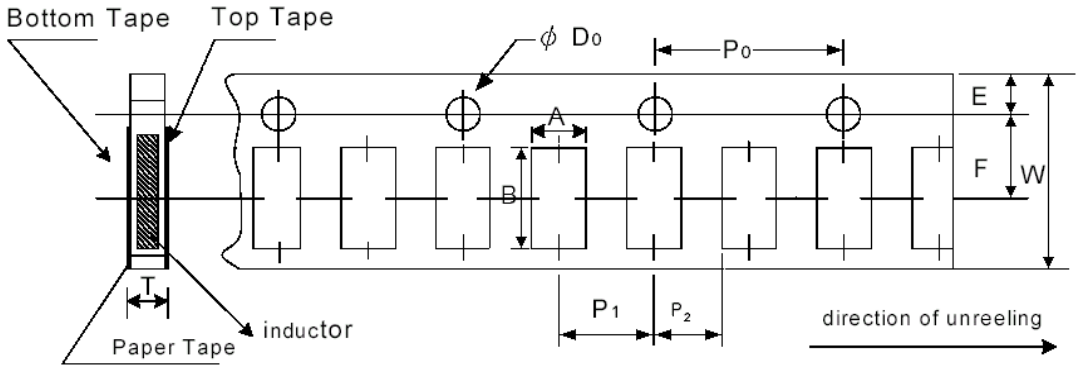
F. Reel Specification:

ϕA	ϕB	ϕC	W	T	Quantity
178 ±1	60 ± 1.0	13.5 ± 0.70	9.5 ± 1.0	11.5 ± 1.0	10,000 PCS



G. Paper Tape Specification:

A	B	W	E	F	Po	P1	P2	ϕDo	T
0.70 ±0.05	1.16 ±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 ±0.05	0.40 ±0.03



Tape & Reel Storage Temperature: 25ºC ± 3ºC, Humidity: < 80% RH.

H. Environmental Characteristics:

	ITEM	Specification	Test Method
1	Bending Test	As SPEC.	JIS-C-5202-6.1.4 Bending Amplitude 3mm for 10 seconds
2	Dielectric Withstand Voltage	>100V	MIL-STD-202F Method 301. Apply 100VA (rms) for 1minute.
3	Insulation Resistance	>1000MΩ	MIL-STD-202F Method 302 Apply 100VDC for 1minute.
4	Resistance to Soldering Heat	△≦ 10%	MIL-STD-202F Method 210E 260ºC ± 5ºC, 10±1seconds
5	High Temperature Exposure	△≦ 10%	JIS-C-5202-7.2 85ºC ± 2ºC, 1000 +48/-0 hours
6	Moisture Resistance	△≦ 10%	MIL-STD-202F Method 103B 40ºC ± 2ºC, 90~95%RH, 1000 +48/-0 hours
7	Low Temperature Storage	△≦ 10%	JIS-C-5202-7.1 -40ºC ± 3ºC, 1000 +48/-0 hours
8	Temperature Cycle	△≦ 10%	JIS-C-5202-7.4 -40/RT/85/RT, 10 cycles
9	Solder-ability	95% min coverage	MIL-STD-202F Method 208H 245ºC ± 5ºC, 2 ± 0.5(sec)