

FEATURES 特征

- Magnetic-resin shielded Construction reduces buzz noise to ultra-low levels.
磁性胶水涂敷结构极大减少了蜂鸣声
- Metallization on ferrite core results in excellent shock resistance and damage-free durability.
在磁芯上金属化电极, 抗跌落冲击强, 经久耐用
- Closed magnetic circuit design reduces leakage flux and Electro Magnetic Interference (EMI).
闭合磁路结构设计, 漏磁少, 抗EMI能力强
- 30% higher current rating than conventional inductors of equal size.
电流特性较同等尺寸传统电感高出30%以上
- Takes up less PCB real estate and save more power.
省空间, 更省电
- Operating Temp : -45°C~+125°C (Including self heating).
工作温度范围:-45°C~+125°C(包括自身温度上升)



APPLICATIONS 用途

- Smart phone, smart TV, set top box, notebook, VR, AR, LED lighting.
智能手机、智能电视、机顶盒、笔记本电脑、虚拟现实、增强现实、LED照明
- Car navigation systems, telecomm base stations.
车载导航影音、通讯设备

PART NUMBERING 产品型号

TNR	5040	S	-	100	M	T	F
①	②	③		④	⑤	⑥	⑦

① Series Name	
TNR	Wire Wound SMD Power Inductors

③ Feature Type	
S	Standard

④ Nominal Inductance	
Code (example)	Nominal Inductance [μ H]
R47	0.47
100	10

⑤ Inductance Tolerance	
K	$\pm 10\%$
M	$\pm 20\%$
N	$\pm 30\%$

⑥ Packaging	
T	Tape & Reel

⑦ HSF Products	
F	Hazardous Substance Free Products

② External Dimensions[LxWxH mm]	
252010	2.5×2.0×1.0
252012	2.5×2.0×1.2
3010	3.0×3.0×1.0
3012	3.0×3.0×1.2
3015	3.0×3.0×1.5
4010	4.0×4.0×1.0
4012	4.0×4.0×1.2
4018	4.0×4.0×1.8
4020	4.0×4.0×2.0
4026	4.0×4.0×2.6
4030	4.0×4.0×3.0
5012	5.0×5.0×1.2
5020	5.0×5.0×2.0
5040	5.0×5.0×4.0
5045	5.0×5.0×4.5
6020	6.0×6.0×2.0
6028	6.0×6.0×2.8
6045	6.0×6.0×4.5
8040	8.0×8.0×4.0
8065	8.0×8.0×6.5

DIMENSIONS & RECOMMENDED LAND PATTERN 尺寸及推荐焊盘

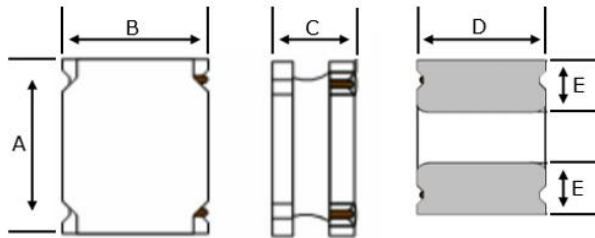


Figure1

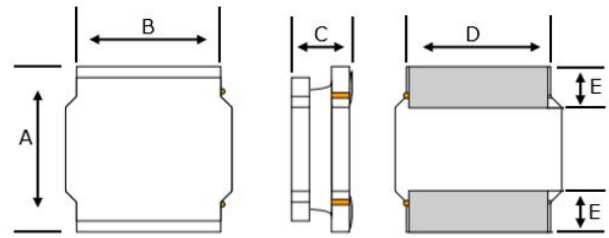


Figure2

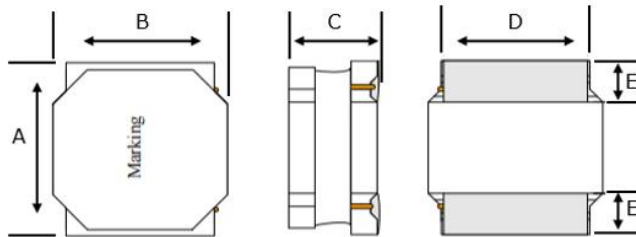
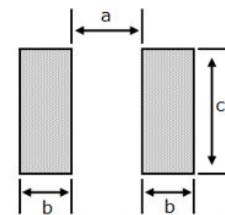


Figure3



Recommended Land Pattern

Unit: mm

Dimensions							Recommended Land Pattern		
Series	Shape	A	B	C Max.	D Typ.	E Typ.	a Typ.	b Typ.	c Typ.
TNR252010	Figure1	2.5±0.1	2.0±0.1	1.0	2.0	0.80	0.80	0.85	2.00
TNR252012	Figure1	2.5±0.1	2.0±0.1	1.2	2.0	0.80	0.80	0.85	2.00
TNR3010	Figure2	3.0±0.2	3.0±0.2	1.0	2.5	0.75	1.50	0.80	2.70
TNR3012	Figure2	3.0±0.2	3.0±0.2	1.2	2.5	0.75	1.50	0.80	2.70
TNR3015	Figure2	3.0±0.2	3.0±0.2	1.5	2.5	0.75	1.50	0.80	2.70
TNR4010	Figure2	4.0±0.2	4.0±0.2	1.0	3.3	0.95	1.90	1.10	3.70
TNR4012	Figure2	4.0±0.2	4.0±0.2	1.2	3.3	0.95	1.90	1.10	3.70
TNR4018	Figure2	4.0±0.2	4.0±0.2	1.8	3.3	0.95	1.90	1.10	3.70
TNR4020	Figure2	4.0±0.2	4.0±0.2	2.0	3.3	0.95	1.90	1.10	3.70
TNR4026	Figure3	4.0±0.2	4.0±0.2	2.6	3.3	0.95	1.90	1.10	3.70
TNR4030	Figure2	4.0±0.2	4.0±0.2	3.0	3.3	0.95	1.90	1.10	3.70
TNR5012	Figure3	5.0±0.2	5.0±0.2	1.2	4.0	1.25	2.30	1.40	4.20
TNR5020	Figure3	5.0±0.2	5.0±0.2	2.0	4.0	1.25	2.30	1.40	4.20
TNR5040	Figure3	5.0±0.2	5.0±0.2	4.0	4.0	1.25	2.30	1.40	4.20
TNR5045	Figure3	5.0±0.2	5.0±0.2	4.5	4.0	1.30	2.30	1.40	4.20
TNR6020	Figure2	6.0±0.3	6.0±0.3	2.0	4.9	1.55	2.80	1.70	5.70
TNR6028	Figure2	6.0±0.3	6.0±0.3	2.8	4.9	1.55	2.80	1.70	5.70
TNR6045	Figure2	6.0±0.3	6.0±0.3	4.5	4.9	1.55	2.80	1.70	5.70
TNR8040	Figure2	8.0±0.3	8.0±0.3	4.2	6.3	2.00	3.80	2.20	7.50
TNR8065	Figure3	8.0±0.3	8.0±0.3	6.5	6.3	2.00	3.80	2.20	7.50

● All products are printed with Marking except the 252010, 252012, 3010, 3012 and 3015.

● The 3010, 3012 and 3015 with Marking can be provided upon customer's request. Please contact your local sales.

ELECTRICAL CHARACTERISTICS 特性规格表

TNR252010 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz,1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR252010S-R47□TF	0.47	N / M	0.056	206	2.35	2.56	2.50	3.35
TNR252010S-R56□TF	0.56	N / M	0.072	160	2.00	2.18	2.90	3.20
TNR252010S-R68□TF	0.68	N / M	0.074	129	2.00	2.18	2.20	2.75
TNR252010S-1R0□TF	1.0	N / M	0.108	100	1.65	1.80	1.85	2.20
TNR252010S-1R5□TF	1.5	N / M	0.182	81	1.30	1.42	1.80	2.10
TNR252010S-2R2□TF	2.2	N / M	0.209	61	1.20	1.31	1.20	1.60
TNR252010S-3R3MTF	3.3	M	0.328	47	0.90	0.98	1.05	1.30
TNR252010S-4R7MTF	4.7	M	0.563	42	0.70	0.76	0.95	1.15
TNR252010S-5R6MTF	5.6	M	0.563	35	0.73	0.80	0.80	0.95
TNR252010S-6R8MTF	6.8	M	0.896	31	0.59	0.64	0.78	0.92
TNR252010S-100MTF	10	M	1.092	27	0.50	0.55	0.65	0.78

TNR252012 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz,1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR252012S-R47□TF	0.47	N / M	0.061	160	2.15	2.34	3.82	4.27
TNR252012S-R68□TF	0.68	N / M	0.074	140	1.95	2.13	3.28	3.68
TNR252012S-1R0□TF	1.0	N / M	0.090	110	1.93	2.10	2.59	2.90
TNR252012S-1R2□TF	1.2	N / M	0.129	100	1.46	1.59	2.38	2.67
TNR252012S-1R5□TF	1.5	N / M	0.147	97	1.40	1.53	2.24	2.51
TNR252012S-2R2□TF	2.2	N / M	0.216	69	1.15	1.25	1.85	2.07
TNR252012S-2R7MTF	2.7	M	0.239	63	1.09	1.19	1.72	1.92
TNR252012S-3R3MTF	3.3	M	0.264	62	1.04	1.13	1.61	1.80
TNR252012S-3R6MTF	3.6	M	0.348	53	0.90	0.98	1.46	1.64
TNR252012S-4R3MTF	4.3	M	0.377	51	0.87	0.95	1.37	1.53
TNR252012S-4R7MTF	4.7	M	0.377	47	0.84	0.92	1.12	1.25
TNR252012S-5R1MTF	5.1	M	0.500	44	0.75	0.82	1.23	1.37
TNR252012S-5R6MTF	5.6	M	0.538	38	0.73	0.80	1.11	1.25
TNR252012S-6R2MTF	6.2	M	0.542	38	0.73	0.80	1.03	1.16
TNR252012S-6R8MTF	6.8	M	0.581	38	0.69	0.75	0.98	1.09
TNR252012S-7R5MTF	7.5	M	0.611	35	0.68	0.74	0.97	1.09
TNR252012S-8R2MTF	8.2	M	0.658	36	0.65	0.71	0.98	1.10
TNR252012S-9R1MTF	9.1	M	0.690	34	0.62	0.68	0.91	1.02
TNR252012S-100MTF	10	M	0.690	34	0.62	0.68	0.79	0.88
TNR252012S-120MTF	12	M	1.075	28	0.51	0.56	0.78	0.88
TNR252012S-150MTF	15	M	1.591	25	0.42	0.46	0.68	0.77

ELECTRICAL CHARACTERISTICS 特性规格表

● TNR252012 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz,1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR252012S-220MTF	22	M	1.976	20	0.38	0.41	0.53	0.59

● TNR3010 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz,1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR3010S-1R0□TF	1.0	N / M	0.085	180	1.45	1.80	1.40	2.10
TNR3010S-1R2□TF	1.2	N / M	0.085	137	1.45	1.80	1.25	1.70
TNR3010S-1R5□TF	1.5	N / M	0.104	120	1.30	1.60	1.27	1.70
TNR3010S-2R2□TF	2.2	N / M	0.143	100	1.09	1.40	1.15	1.50
TNR3010S-2R7□TF	2.7	N / M	0.169	90	1.02	1.40	1.00	1.20
TNR3010S-3R3□TF	3.3	N / M	0.189	74	0.96	1.20	0.97	1.20
TNR3010S-3R6MTF	3.6	M	0.215	67	0.90	1.10	0.95	1.20
TNR3010S-4R7MTF	4.7	M	0.293	59	0.77	1.10	0.75	1.05
TNR3010S-5R6MTF	5.6	M	0.322	40	0.70	1.05	0.58	0.65
TNR3010S-6R8MTF	6.8	M	0.397	42	0.66	0.96	0.55	0.72
TNR3010S-8R2MTF	8.2	M	0.520	23	0.58	0.70	0.55	0.70
TNR3010S-100MTF	10	M	0.520	39	0.58	0.70	0.55	0.75
TNR3010S-120MTF	12	M	0.657	36	0.52	0.67	0.43	0.65
TNR3010S-150MTF	15	M	0.793	30	0.47	0.57	0.42	0.57
TNR3010S-220MTF	22	M	1.209	28	0.38	0.52	0.35	0.48
TNR3010S-270MTF	27	M	1.404	25	0.35	0.50	0.30	0.45
TNR3010S-330MTF	33	M	2.015	18	0.30	0.55	0.29	0.42
TNR3010S-390MTF	39	M	2.275	18	0.28	0.53	0.28	0.38
TNR3010S-430MTF	43	M	2.340	18	0.27	0.52	0.23	0.36
TNR3010S-470MTF	47	M	2.535	18	0.26	0.52	0.22	0.35
TNR3010S-510MTF	51	M	2.860	18	0.25	0.48	0.21	0.33
TNR3010S-560MTF	56	M	3.016	16	0.24	0.35	0.21	0.28

ELECTRICAL CHARACTERISTICS 特性规格表

● TNR3012 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz,1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR3012S-R22□TF	0.22	N / M	0.022	321	3.00	3.30	5.30	6.00
TNR3012S-R82□TF	0.82	N / M	0.039	180	2.47	3.00	2.05	2.80
TNR3012S-1R0□TF	1.0	N / M	0.052	120	2.20	2.70	1.87	2.80
TNR3012S-1R2□TF	1.2	N / M	0.059	120	2.01	2.20	2.22	2.50
TNR3012S-1R5□TF	1.5	N / M	0.078	110	2.01	2.20	1.62	1.90
TNR3012S-1R8□TF	1.8	N / M	0.082	90	1.65	1.80	1.30	1.90
TNR3012S-2R2□TF	2.2	N / M	0.098	84	1.55	1.70	1.20	1.90
TNR3012S-2R4□TF	2.4	N / M	0.088	100	1.60	1.70	1.15	1.50
TNR3012S-2R7MTF	2.7	M	0.110	65	1.48	1.50	1.14	1.50
TNR3012S-3R3MTF	3.3	M	0.130	64	1.36	1.40	1.05	1.50
TNR3012S-3R6MTF	3.6	M	0.130	36	1.36	1.40	1.05	1.50
TNR3012S-3R9MTF	3.9	M	0.189	61	1.24	1.30	1.00	1.30
TNR3012S-4R7MTF	4.7	M	0.156	61	1.24	1.30	0.90	1.00
TNR3012S-6R8MTF	6.8	M	0.247	61	0.98	1.10	0.75	0.90
TNR3012S-100MTF	10	M	0.345	42	0.83	0.90	0.60	0.88
TNR3012S-120MTF	12	M	0.449	32	0.73	0.84	0.48	0.67
TNR3012S-150MTF	15	M	0.468	27	0.71	0.77	0.45	0.62
TNR3012S-180MTF	18	M	0.709	25	0.58	0.65	0.43	0.59
TNR3012S-220MTF	22	M	0.839	23	0.53	0.59	0.42	0.52
TNR3012S-270MTF	27	M	1.131	21	0.47	0.51	0.35	0.48
TNR3012S-330MTF	33	M	1.138	18	0.46	0.50	0.36	0.46
TNR3012S-360MTF	36	M	1.235	18	0.44	0.48	0.34	0.44
TNR3012S-390MTF	39	M	1.729	18	0.37	0.41	0.30	0.39
TNR3012S-470MTF	47	M	1.885	14	0.35	0.40	0.27	0.35
TNR3012S-560MTF	56	M	1.794	9	0.28	0.40	0.26	0.33
TNR3012S-680MTF	68	M	2.171	7	0.33	0.37	0.24	0.29
TNR3012S-820MTF	82	M	3.302	7	0.27	0.31	0.17	0.27
TNR3012S-101MTF	100	M	3.718	5	0.25	0.29	0.21	0.23

ELECTRICAL CHARACTERISTICS 特性规格表

● TNR3015 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz,1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR3015S-R50□TF	0.50	N / M	0.039	162	2.60	2.80	3.90	4.20
TNR3015S-1R0□TF	1.0	N / M	0.039	150	2.35	2.50	2.32	2.80
TNR3015S-1R2□TF	1.2	N / M	0.052	110	1.95	2.30	2.21	3.10
TNR3015S-1R5□TF	1.5	N / M	0.065	100	1.70	2.20	2.30	2.70
TNR3015S-1R8□TF	1.8	N / M	0.065	92	1.70	2.20	1.75	2.20
TNR3015S-2R2□TF	2.2	N / M	0.078	86	1.60	2.00	1.60	2.00
TNR3015S-2R7□TF	2.7	N / M	0.098	64	1.43	1.90	1.52	1.90
TNR3015S-3R3MTF	3.3	M	0.104	68	1.36	1.60	1.32	1.81
TNR3015S-3R6MTF	3.6	M	0.137	59	1.20	1.50	1.28	1.60
TNR3015S-3R9MTF	3.9	M	0.137	47	1.20	1.50	1.20	1.40
TNR3015S-4R3MTF	4.3	M	0.150	53	1.14	1.30	1.20	1.40
TNR3015S-4R7MTF	4.7	M	0.163	46	1.09	1.30	1.10	1.40
TNR3015S-5R1MTF	5.1	M	0.173	49	1.05	1.20	1.00	1.20
TNR3015S-6R2MTF	6.2	M	0.254	46	0.86	1.00	1.00	1.20
TNR3015S-6R8MTF	6.8	M	0.260	39	0.85	1.10	0.85	1.10
TNR3015S-100MTF	10	M	0.325	41	0.77	0.90	0.72	0.92
TNR3015S-120MTF	12	M	0.416	32	0.68	0.89	0.70	0.90
TNR3015S-150MTF	15	M	0.455	30	0.65	0.72	0.66	0.88
TNR3015S-180MTF	18	M	0.559	23	0.59	0.72	0.56	0.72
TNR3015S-220MTF	22	M	0.598	23	0.57	0.69	0.52	0.68
TNR3015S-270MTF	27	M	0.949	22	0.45	0.56	0.48	0.56
TNR3015S-330MTF	33	M	1.066	20	0.43	0.51	0.44	0.53
TNR3015S-390MTF	39	M	1.294	14	0.39	0.44	0.41	0.55
TNR3015S-430MTF	43	M	1.378	16	0.37	0.48	0.37	0.43
TNR3015S-470MTF	47	M	1.625	14	0.35	0.44	0.35	0.43
TNR3015S-560MTF	56	M	1.664	13	0.34	0.41	0.33	0.42
TNR3015S-620MTF	62	M	2.093	13	0.30	0.41	0.30	0.40
TNR3015S-680MTF	68	M	3.510	11	0.23	0.31	0.28	0.37
TNR3015S-101MTF	100	M	4.043	7.2	0.21	0.25	0.23	0.25
TNR3015S-151MTF	150	M	4.940	4.5	0.19	0.23	0.18	0.22

ELECTRICAL CHARACTERISTICS 特性规格表

TNR4010 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz,1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR4010S-1R0□TF	1.0	N / M	0.067	104	1.90	2.40	2.00	2.30
TNR4010S-1R5□TF	1.5	N / M	0.084	71	1.70	2.00	1.68	2.00
TNR4010S-2R2MTF	2.2	M	0.102	52	1.50	2.00	1.20	1.50
TNR4010S-3R3MTF	3.3	M	0.120	42	1.40	1.80	1.10	1.40
TNR4010S-4R7MTF	4.7	M	0.168	30	1.20	1.50	0.95	1.10
TNR4010S-6R8MTF	6.8	M	0.240	26	1.00	1.20	0.80	0.95
TNR4010S-100MTF	10	M	0.360	19	0.75	1.00	0.62	0.75
TNR4010S-150MTF	15	M	0.516	17	0.60	0.85	0.54	0.61
TNR4010S-220MTF	22	M	0.684	11	0.50	0.75	0.45	0.52

TNR4012 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz,1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR4012S-R82□TF	0.82	N / M	0.065	150	1.65	2.50	3.02	3.30
TNR4012S-1R0□TF	1.0	N / M	0.065	120	1.65	2.50	2.61	3.20
TNR4012S-1R5□TF	1.5	N / M	0.085	90	1.46	2.20	2.10	2.70
TNR4012S-1R8□TF	1.8	N / M	0.104	88	1.32	1.90	2.12	2.60
TNR4012S-2R2□TF	2.2	N / M	0.104	74	1.32	1.90	1.76	2.30
TNR4012S-2R7□TF	2.7	N / M	0.117	71	1.25	1.70	1.90	2.30
TNR4012S-3R3□TF	3.3	N / M	0.143	60	1.12	1.60	1.72	2.10
TNR4012S-3R6□TF	3.6	N / M	0.143	57	1.12	1.60	1.20	1.70
TNR4012S-4R3□TF	4.3	N / M	0.182	54	1.00	1.50	1.58	1.70
TNR4012S-4R7□TF	4.7	N / M	0.163	50	1.05	1.50	1.15	1.80
TNR4012S-5R1□TF	5.1	N / M	0.201	50	0.95	1.50	1.55	1.60
TNR4012S-5R6□TF	5.6	N / M	0.182	42	1.00	1.20	1.00	1.60
TNR4012S-6R8MTF	6.8	M	0.257	40	0.84	1.20	0.85	1.40
TNR4012S-100MTF	10	M	0.345	33	0.77	1.00	0.80	1.10
TNR4012S-120MTF	12	M	0.377	32	0.70	0.95	0.66	1.00
TNR4012S-150MTF	15	M	0.442	25	0.64	0.85	0.56	0.80
TNR4012S-180MTF	18	M	0.611	23	0.55	0.80	0.55	0.75
TNR4012S-220MTF	22	M	0.763	20	0.49	0.75	0.46	0.70
TNR4012S-270MTF	27	M	0.936	18	0.45	0.60	0.50	0.70
TNR4012S-330MTF	33	M	1.053	17	0.42	0.58	0.42	0.60
TNR4012S-360MTF	36	M	1.170	14	0.40	0.56	0.40	0.50
TNR4012S-390MTF	39	M	1.430	16	0.37	0.50	0.55	0.66
TNR4012S-470MTF	47	M	1.430	12	0.37	0.50	0.35	0.50

ELECTRICAL CHARACTERISTICS 特性规格表

● TNR4012 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz,1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR4012S-560MTF	56	M	1.625	11	0.33	0.46	0.33	0.45
TNR4012S-680MTF	68	M	2.535	11	0.27	0.45	0.38	0.45
TNR4012S-820MTF	82	M	2.782	11	0.26	0.36	0.28	0.40
TNR4012S-101MTF	100	M	2.873	9.4	0.25	0.35	0.25	0.30

● TNR4018 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz,1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR4018S-R47□TF	0.47	N / M	0.018	155	4.00	4.50	4.30	5.20
TNR4018S-R68□TF	0.68	N / M	0.026	128	3.30	3.80	4.90	5.60
TNR4018S-1R0□TF	1.0	N / M	0.033	80	2.00	3.30	4.80	5.20
TNR4018S-1R5□TF	1.5	N / M	0.039	65	1.80	3.20	3.35	4.00
TNR4018S-1R8□TF	1.8	N / M	0.044	54	2.00	2.80	3.00	3.40
TNR4018S-2R2□TF	2.2	N / M	0.059	52	1.65	2.60	2.70	3.20
TNR4018S-3R3MTF	3.3	M	0.091	44	1.23	2.10	2.45	2.90
TNR4018S-4R7MTF	4.7	M	0.117	34	1.20	1.80	1.70	2.20
TNR4018S-6R8MTF	6.8	M	0.143	29	1.06	1.50	1.45	2.00
TNR4018S-100MTF	10	M	0.234	24	0.84	1.20	1.30	1.60
TNR4018S-150MTF	15	M	0.325	19	0.65	1.00	0.94	1.10
TNR4018S-220MTF	22	M	0.468	16	0.59	0.85	0.80	0.88
TNR4018S-330MTF	33	M	0.689	12	0.49	0.72	0.56	0.75
TNR4018S-470MTF	47	M	0.845	10	0.42	0.65	0.57	0.70
TNR4018S-680MTF	68	M	1.300	8.3	0.32	0.52	0.47	0.51
TNR4018S-101MTF	100	M	2.275	6.5	0.25	0.41	0.40	0.44
TNR4018S-151MTF	150	M	3.250	5.5	0.22	0.36	0.31	0.34
TNR4018S-221MTF	220	M	5.200	4	0.17	0.27	0.27	0.30

ELECTRICAL CHARACTERISTICS 特性规格表
TNR4020 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz,1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR4020S-R24MTF	0.24	M	0.014	283	4.50	5.20	10.50	12.50
TNR4020S-R33□TF	0.33	N / M	0.016	223	3.30	4.90	7.50	8.50
TNR4020S-R47□TF	0.47	N / M	0.029	160	3.30	3.70	7.00	7.50
TNR4020S-R68□TF	0.68	N / M	0.036	120	2.80	3.30	6.40	6.60
TNR4020S-1R0□TF	1.0	N / M	0.038	75	2.15	3.20	4.78	5.20
TNR4020S-1R2□TF	1.2	N / M	0.038	72	2.15	3.20	5.10	5.60
TNR4020S-1R5□TF	1.5	N / M	0.046	71	1.98	3.00	4.45	4.90
TNR4020S-2R2□TF	2.2	N / M	0.052	49	1.85	2.80	3.40	3.70
TNR4020S-3R3□TF	3.3	N / M	0.091	44	1.40	2.50	3.20	3.50
TNR4020S-3R6□TF	3.6	N / M	0.072	49	1.54	2.50	2.80	3.00
TNR4020S-4R7□TF	4.7	N / M	0.098	42	1.34	2.00	2.35	2.50
TNR4020S-5R1MTF	5.1	M	0.111	42	1.27	1.80	2.30	2.50
TNR4020S-5R6MTF	5.6	M	0.117	30	1.22	1.80	2.20	2.40
TNR4020S-6R2MTF	6.2	M	0.150	36	1.08	1.60	2.15	2.30
TNR4020S-6R8MTF	6.8	M	0.163	33	1.04	1.60	2.20	2.40
TNR4020S-7R5MTF	7.5	M	0.150	30	1.08	1.50	1.85	2.00
TNR4020S-8R2MTF	8.2	M	0.163	27	1.04	1.40	1.75	1.90
TNR4020S-100MTF	10	M	0.215	26	0.90	1.20	1.60	1.70
TNR4020S-120MTF	12	M	0.228	26	0.88	1.20	1.50	1.60
TNR4020S-150MTF	15	M	0.299	24	0.77	1.10	1.35	1.50
TNR4020S-220MTF	22	M	0.455	15	0.62	0.87	1.05	1.10
TNR4020S-270MTF	27	M	0.709	14	0.50	0.70	1.02	1.10
TNR4020S-330MTF	33	M	0.715	11	0.49	0.68	0.85	0.93
TNR4020S-390MTF	39	M	0.845	11	0.46	0.64	0.82	0.90
TNR4020S-430MTF	43	M	0.858	10	0.45	0.63	0.77	0.85
TNR4020S-470MTF	47	M	0.923	10	0.44	0.61	0.74	0.81
TNR4020S-510MTF	51	M	0.975	10	0.42	0.59	0.70	0.77
TNR4020S-560MTF	56	M	1.040	10	0.41	0.57	0.66	0.72
TNR4020S-620MTF	62	M	1.170	9.6	0.39	0.52	0.65	0.71
TNR4020S-680MTF	68	M	1.380	7.7	0.36	0.50	0.61	0.67
TNR4020S-750MTF	75	M	1.510	7.7	0.35	0.49	0.70	0.77
TNR4020S-820MTF	82	M	1.520	7.2	0.34	0.47	0.50	0.55
TNR4020S-101MTF	100	M	2.020	6.3	0.31	0.43	0.48	0.53

ELECTRICAL CHARACTERISTICS 特性规格表

TNR4026 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz,1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR4026S-1R0□TF	1.0	N / M	0.031	151	3.05	3.66	3.35	3.72
TNR4026S-1R2□TF	1.2	N / M	0.039	120	2.33	2.80	3.15	3.50
TNR4026S-1R5□TF	1.5	N / M	0.039	100	2.33	2.80	2.44	2.71
TNR4026S-2R2MTF	2.2	M	0.051	96	2.03	2.44	2.13	2.36
TNR4026S-3R3MTF	3.3	M	0.064	58	1.73	2.08	1.83	2.03
TNR4026S-4R7MTF	4.7	M	0.071	46	1.62	1.94	1.47	1.63
TNR4026S-6R8MTF	6.8	M	0.084	33	1.52	1.82	1.32	1.47
TNR4026S-100MTF	10	M	0.109	26	1.32	1.58	1.02	1.13
TNR4026S-150MTF	15	M	0.142	19	1.12	1.34	0.91	1.01
TNR4026S-220MTF	22	M	0.212	13	0.91	1.09	0.61	0.68
TNR4026S-330MTF	33	M	0.347	9	0.71	0.85	0.56	0.62
TNR4026S-470MTF	47	M	0.386	6	0.66	0.79	0.41	0.46

TNR4030 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz,1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR4030S-R68□TF	0.68	N / M	0.013	130	4.56	5.10	6.80	8.00
TNR4030S-R91□TF	0.91	N / M	0.017	100	4.15	4.70	6.25	6.80
TNR4030S-1R0□TF	1.0	N / M	0.018	70	4.15	4.70	5.26	5.70
TNR4030S-1R2□TF	1.2	N / M	0.020	80	3.82	4.20	5.80	6.30
TNR4030S-1R5□TF	1.5	N / M	0.026	62	3.34	3.60	4.84	5.30
TNR4030S-1R8□TF	1.8	N / M	0.033	60	3.20	3.30	4.50	5.00
TNR4030S-2R2□TF	2.2	N / M	0.039	52	2.95	3.20	4.90	5.80
TNR4030S-3R3MTF	3.3	M	0.052	38	2.40	2.60	3.30	3.60
TNR4030S-3R9MTF	3.9	M	0.074	32	2.10	2.30	3.00	3.30
TNR4030S-4R3MTF	4.3	M	0.072	37	2.10	2.30	2.95	3.20
TNR4030S-4R7MTF	4.7	M	0.078	31	2.00	2.30	2.90	3.20
TNR4030S-5R6MTF	5.6	M	0.085	30	1.95	2.10	2.60	2.80
TNR4030S-6R8MTF	6.8	M	0.117	24	1.60	1.70	2.75	3.00
TNR4030S-7R5MTF	7.5	M	0.111	26	1.65	1.80	2.20	2.40
TNR4030S-8R2MTF	8.2	M	0.117	26	1.60	1.70	2.10	2.30
TNR4030S-100MTF	10	M	0.130	21	1.50	1.60	1.95	2.40
TNR4030S-120MTF	12	M	0.176	18	1.30	1.40	1.70	1.80
TNR4030S-150MTF	15	M	0.247	16	1.11	1.20	1.65	1.80
TNR4030S-180MTF	18	M	0.260	10	1.10	1.20	1.40	1.50
TNR4030S-220MTF	22	M	0.293	10	1.00	1.20	1.30	1.40

■ ELECTRICAL CHARACTERISTICS 特性规格表

● TNR4030 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz,1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR4030S-330MTF	33	M	0.429	10	0.84	0.92	1.10	1.20
TNR4030S-360MTF	36	M	0.436	9.8	0.83	0.91	1.05	1.10
TNR4030S-390MTF	39	M	0.566	10	0.73	0.80	1.03	1.10
TNR4030S-470MTF	47	M	0.579	8.4	0.72	0.80	0.95	1.00
TNR4030S-510MTF	51	M	0.611	8.4	0.70	0.80	0.90	1.13
TNR4030S-560MTF	56	M	0.722	8.4	0.65	0.71	0.85	0.94
TNR4030S-620MTF	62	M	0.760	7	0.63	0.70	0.80	0.99
TNR4030S-680MTF	68	M	1.128	7	0.52	0.57	0.72	0.80
TNR4030S-750MTF	75	M	1.326	6.3	0.48	0.53	0.70	0.88
TNR4030S-820MTF	82	M	1.378	5.6	0.47	0.52	0.66	0.72
TNR4030S-910MTF	91	M	1.430	5.6	0.46	0.50	0.65	0.71
TNR4030S-101MTF	100	M	1.495	5.6	0.45	0.49	0.60	0.73
TNR4030S-121MTF	120	M	1.755	5.4	0.42	0.46	0.55	0.60
TNR4030S-151MTF	150	M	2.340	4	0.30	0.35	0.50	0.55
TNR4030S-221MTF	220	M	3.250	4.2	0.35	0.40	0.40	0.50
TNR4030S-331MTF	330	M	5.200	2.7	0.25	0.26	0.30	0.40
TNR4030S-471□TF	470	K/M	9.360	2	0.20	0.23	0.30	0.35
TNR4030S-501MTF	500	M	9.027	2	0.15	0.20	0.28	0.30
TNR4030S-681MTF	680	M	9.854	1.2	0.14	0.18	0.19	0.20

● TNR5012 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz,1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR5012S-1R0□TF	1.0	N / M	0.068	103	2.00	2.40	4.40	4.70
TNR5012S-1R5□TF	1.5	N / M	0.086	68	1.90	2.20	3.70	3.80
TNR5012S-2R2□TF	2.2	N / M	0.108	50	1.70	2.00	3.10	3.20
TNR5012S-3R3□TF	3.3	N / M	0.151	34	1.40	1.70	2.40	2.60
TNR5012S-4R7□TF	4.7	N / M	0.197	31	1.30	1.50	2.20	2.30
TNR5012S-6R8MTF	6.8	M	0.294	22	1.00	1.20	1.70	1.90
TNR5012S-100MTF	10	M	0.413	17	0.85	1.00	1.40	1.50
TNR5012S-150MTF	15	M	0.523	13	0.80	0.92	1.20	1.30
TNR5012S-220MTF	22	M	0.858	16	0.60	0.68	0.88	0.98

ELECTRICAL CHARACTERISTICS 特性规格表

● TNR5020 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz, 1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR5020S-R22□TF	0.22	N / M	0.011	280	5.30	6.00	9.00	12.00
TNR5020S-R24□TF	0.24	N / M	0.011	248	5.30	6.00	8.00	10.00
TNR5020S-R47□TF	0.47	N / M	0.017	160	4.60	5.00	6.15	6.70
TNR5020S-R56□TF	0.56	N / M	0.022	137	3.80	4.20	8.50	9.60
TNR5020S-R68□TF	0.68	N / M	0.022	120	4.00	4.40	5.50	6.00
TNR5020S-R75□TF	0.75	N / M	0.022	117	4.00	4.40	5.50	6.00
TNR5020S-1R0□TF	1.0	N / M	0.026	114	3.80	4.10	4.10	5.00
TNR5020S-1R2□TF	1.2	N / M	0.029	83	3.55	3.90	4.50	4.90
TNR5020S-1R5□TF	1.5	N / M	0.034	68	3.20	3.50	4.10	4.50
TNR5020S-2R2□TF	2.2	N / M	0.042	57	2.90	3.10	3.20	4.00
TNR5020S-2R7□TF	2.7	N / M	0.049	52	2.70	2.90	2.90	3.50
TNR5020S-3R0□TF	3.0	N / M	0.049	49	2.70	2.90	2.55	2.80
TNR5020S-3R3□TF	3.3	N / M	0.056	46	2.50	2.70	2.55	3.00
TNR5020S-3R6□TF	3.6	N / M	0.056	43	2.50	2.70	2.80	3.00
TNR5020S-3R9□TF	3.9	N / M	0.056	40	2.50	2.70	2.30	2.80
TNR5020S-4R3MTF	4.3	M	0.074	37	2.20	2.40	2.50	3.00
TNR5020S-4R7MTF	4.7	M	0.074	37	2.20	2.40	2.50	2.70
TNR5020S-5R1MTF	5.1	M	0.083	32	2.05	2.20	2.25	2.60
TNR5020S-5R6MTF	5.6	M	0.083	32	2.05	2.20	2.30	2.50
TNR5020S-6R8MTF	6.8	M	0.108	30	1.80	1.90	2.05	2.20
TNR5020S-7R5MTF	7.5	M	0.117	26	1.75	1.90	1.85	2.00
TNR5020S-8R2MTF	8.2	M	0.127	26	1.65	1.80	1.85	2.00
TNR5020S-9R1MTF	9.1	M	0.143	24	1.55	1.70	1.70	1.80
TNR5020S-100MTF	10	M	0.143	24	1.55	1.70	1.70	1.80
TNR5020S-120MTF	12	M	0.182	22	1.40	1.50	1.50	1.60
TNR5020S-150MTF	15	M	0.215	20	1.25	1.30	1.35	1.40
TNR5020S-180MTF	18	M	0.260	16	1.15	1.20	1.25	1.30
TNR5020S-220MTF	22	M	0.294	14	1.10	1.20	1.15	1.20
TNR5020S-330MTF	33	M	0.507	10	0.90	0.99	0.92	1.00
TNR5020S-470MTF	47	M	0.680	7	0.77	0.84	0.77	0.84
TNR5020S-560MTF	56	M	0.819	6	0.70	0.77	0.77	0.84
TNR5020S-680MTF	68	M	0.962	6	0.64	0.70	0.65	0.70
TNR5020S-820MTF	82	M	1.158	6	0.50	0.60	0.65	0.75
TNR5020S-101MTF	100	M	1.430	6	0.53	0.58	0.53	0.58
TNR5020S-121MTF	120	M	1.755	6	0.40	0.50	0.42	0.53
TNR5020S-201MTF	200	M	2.600	4.5	0.40	0.45	0.30	0.33

ELECTRICAL CHARACTERISTICS 特性规格表

● TNR5040 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz, 1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR5040S-R22MTF	0.22	M	0.008	289	6.50	7.50	18.00	20.00
TNR5040S-R24□TF	0.24	N / M	0.008	251	6.40	7.40	15.70	18.00
TNR5040S-R47MTF	0.47	M	0.013	171	6.60	7.60	10.00	11.50
TNR5040S-1R0□TF	1.0	N / M	0.018	117	4.90	5.10	7.35	8.20
TNR5040S-1R2□TF	1.2	N / M	0.021	110	4.15	4.30	6.50	7.10
TNR5040S-1R5□TF	1.5	N / M	0.020	86	4.30	4.80	6.30	7.30
TNR5040S-1R8MTF	1.8	M	0.021	55	4.15	4.30	5.50	6.40
TNR5040S-2R2□TF	2.2	N / M	0.027	50	3.80	4.30	4.90	5.60
TNR5040S-2R7□TF	2.7	N / M	0.029	37	3.60	4.10	4.30	5.10
TNR5040S-3R0□TF	3.0	N / M	0.029	37	3.60	4.20	4.15	4.80
TNR5040S-3R3□TF	3.3	N / M	0.031	32	3.40	3.90	3.95	4.60
TNR5040S-3R6MTF	3.6	M	0.031	30	3.30	3.70	3.80	4.40
TNR5040S-3R9□TF	3.9	N / M	0.035	29	3.20	3.70	3.55	4.20
TNR5040S-4R7□TF	4.7	N / M	0.041	28	3.00	3.30	3.50	3.90
TNR5040S-5R6MTF	5.6	M	0.046	27	2.80	3.10	3.00	4.10
TNR5040S-6R8MTF	6.8	M	0.056	21	2.50	2.80	2.90	3.50
TNR5040S-8R2MTF	8.2	M	0.062	20	2.30	2.60	2.70	3.00
TNR5040S-100MTF	10	M	0.083	18	2.10	2.40	2.35	2.90
TNR5040S-120MTF	12	M	0.100	14	2.00	2.10	2.20	2.50
TNR5040S-150MTF	15	M	0.112	13	2.00	2.10	2.00	2.30
TNR5040S-180MTF	18	M	0.155	12	1.45	1.65	1.70	2.00
TNR5040S-220MTF	22	M	0.168	11	1.50	1.60	1.60	1.90
TNR5040S-270MTF	27	M	0.244	9.8	1.10	1.25	1.52	1.75
TNR5040S-330MTF	33	M	0.244	9	1.20	1.40	1.30	1.50
TNR5040S-470MTF	47	M	0.354	7	1.00	1.10	1.10	1.30
TNR5040S-510MTF	51	M	0.494	6	1.00	1.10	1.00	1.20
TNR5040S-560MTF	56	M	0.494	6	0.80	0.90	1.05	1.20
TNR5040S-680MTF	68	M	0.520	6	0.80	0.90	0.90	1.10
TNR5040S-750MTF	75	M	0.585	6	0.72	0.80	0.85	0.95
TNR5040S-101MTF	100	M	0.728	5	0.70	0.80	0.75	0.90
TNR5040S-151MTF	150	M	0.975	3.7	0.60	0.70	0.65	0.67
TNR5040S-221MTF	220	M	1.820	3	0.40	0.50	0.48	0.55
TNR5040S-301MTF	300	M	2.600	2.7	0.35	0.40	0.50	0.58
TNR5040S-331MTF	330	M	2.730	2.7	0.40	0.50	0.42	0.47
TNR5040S-471MTF	470	M	3.900	2.7	0.35	0.40	0.37	0.43
TNR5040S-561MTF	560	M	4.920	1.5	0.31	0.35	0.31	0.36
TNR5040S-681MTF	680	M	5.070	1.6	0.25	0.30	0.30	0.35
TNR5040S-102MTF	1000	M	7.800	1.3	0.20	0.23	0.21	0.25

ELECTRICAL CHARACTERISTICS 特性规格表

● TNR5045 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz,1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR5045S-2R2MTF	2.2	M	0.029	50	4.70	5.40	6.40	7.20
TNR5045S-100MTF	10	M	0.079	17	2.50	2.90	3.20	3.70
TNR5045S-220MTF	22	M	0.163	10	1.55	1.80	2.00	2.35

● TNR6020 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz,1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR6020S-R50□TF	0.50	N / M	0.018	120	4.00	5.00	4.50	6.00
TNR6020S-R68□TF	0.68	N / M	0.022	115	3.80	4.80	6.55	7.80
TNR6020S-R82□TF	0.82	N / M	0.022	110	3.80	4.80	5.30	6.30
TNR6020S-1R0□TF	1.0	N / M	0.026	100	3.50	4.40	4.15	5.00
TNR6020S-1R2□TF	1.2	N / M	0.029	88	3.20	4.00	5.90	7.00
TNR6020S-1R5□TF	1.5	N / M	0.029	79	3.20	4.00	4.25	5.10
TNR6020S-1R8□TF	1.8	N / M	0.036	68	2.75	3.50	4.85	5.80
TNR6020S-2R0□TF	2.0	N / M	0.046	65	2.60	3.30	4.10	4.90
TNR6020S-2R2□TF	2.2	N / M	0.036	61	2.75	3.50	3.75	4.50
TNR6020S-2R7□TF	2.7	N / M	0.046	56	2.60	3.30	3.90	4.60
TNR6020S-3R3□TF	3.3	N / M	0.046	51	2.60	3.30	3.15	3.70
TNR6020S-3R9□TF	3.9	N / M	0.064	45	2.10	2.60	3.25	3.90
TNR6020S-4R3□TF	4.3	N / M	0.064	44	2.10	2.60	2.70	3.20
TNR6020S-4R7□TF	4.7	N / M	0.075	41	2.00	2.50	3.00	3.60
TNR6020S-5R6□TF	5.6	N / M	0.075	36	1.90	2.40	2.40	2.90
TNR6020S-6R2□TF	6.2	N / M	0.103	31	1.80	2.30	2.30	2.70
TNR6020S-6R8□TF	6.8	N / M	0.103	31	1.80	2.30	2.20	2.60
TNR6020S-8R2□TF	8.2	N / M	0.137	27	1.40	1.80	2.10	2.50
TNR6020S-100MTF	10	M	0.137	27	1.40	1.80	1.75	2.10
TNR6020S-120MTF	12	M	0.156	25	1.30	1.60	1.45	1.70
TNR6020S-150MTF	15	M	0.189	21	1.20	1.50	1.20	1.40
TNR6020S-180MTF	18	M	0.234	18	1.08	1.40	1.20	1.40
TNR6020S-220MTF	22	M	0.265	16	1.00	1.30	1.05	1.20
TNR6020S-330MTF	33	M	0.390	11	0.84	1.05	0.95	1.10
TNR6020S-470MTF	47	M	0.559	10	0.80	0.90	0.70	0.90
TNR6020S-331MTF	330	M	3.419	3	0.33	0.39	0.27	0.33

ELECTRICAL CHARACTERISTICS 特性规格表
TNR6028 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz,1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR6028S-R82□TF	0.82	N / M	0.016	97	5.20	6.00	6.50	9.00
TNR6028S-1R0□TF	1.0	N / M	0.013	70	5.20	5.70	5.75	7.00
TNR6028S-1R2□TF	1.2	N / M	0.017	69	4.58	5.00	6.40	7.50
TNR6028S-1R5□TF	1.5	N / M	0.017	65	4.58	5.00	6.00	6.60
TNR6028S-2R2□TF	2.2	N / M	0.026	48	3.75	4.10	5.10	5.60
TNR6028S-2R7□TF	2.7	N / M	0.026	48	3.75	4.10	3.80	4.10
TNR6028S-3R3□TF	3.3	N / M	0.033	41	3.48	3.80	4.15	4.50
TNR6028S-4R7□TF	4.7	N / M	0.039	35	3.08	3.40	3.00	3.30
TNR6028S-5R1□TF	5.1	N / M	0.056	32	2.60	2.80	3.20	3.50
TNR6028S-6R2MTF	6.2	M	0.061	30	2.40	2.60	3.05	3.30
TNR6028S-6R8MTF	6.8	M	0.061	27	2.40	2.60	2.60	3.00
TNR6028S-8R2MTF	8.2	M	0.072	24	2.25	2.50	2.30	2.50
TNR6028S-9R1MTF	9.1	M	0.096	24	2.15	2.40	2.55	2.80
TNR6028S-100MTF	10	M	0.094	23	1.95	2.40	2.04	2.50
TNR6028S-120MTF	12	M	0.104	18	1.85	2.00	1.80	2.00
TNR6028S-150MTF	15	M	0.163	18	1.45	1.60	1.75	1.90
TNR6028S-180MTF	18	M	0.156	15	1.45	1.60	1.52	1.80
TNR6028S-220MTF	22	M	0.182	14	1.40	1.60	1.45	1.80
TNR6028S-270MTF	27	M	0.202	13	1.32	1.40	1.50	1.60
TNR6028S-330MTF	33	M	0.241	12	1.22	1.30	1.35	1.50
TNR6028S-360MTF	36	M	0.280	11	1.13	1.20	1.25	1.40
TNR6028S-390MTF	39	M	0.293	11	1.10	1.20	1.25	1.40
TNR6028S-470MTF	47	M	0.410	9.5	1.06	1.10	1.15	1.30
TNR6028S-560MTF	56	M	0.449	8.2	0.89	1.00	1.05	1.20
TNR6028S-680MTF	68	M	0.468	7.7	0.86	0.95	0.80	0.95
TNR6028S-750MTF	75	M	0.533	7.7	0.81	0.90	0.90	0.99
TNR6028S-820MTF	82	M	0.650	7.7	0.70	0.77	0.80	0.88
TNR6028S-101MTF	100	M	0.650	7.1	0.70	0.77	0.65	0.71
TNR6028S-401MTF	400	M	2.808	2.8	0.40	0.45	0.30	0.33
TNR6028S-102MTF	1000	M	7.540	1.5	0.23	0.26	0.18	0.22

ELECTRICAL CHARACTERISTICS 特性规格表

● TNR6045 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz, 1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR6045S-R47□TF	0.47	N / M	0.008	155	6.50	6.60	15.00	16.50
TNR6045S-R56□TF	0.56	N / M	0.008	142	6.50	6.60	14.00	15.00
TNR6045S-R68□TF	0.68	N / M	0.008	99	5.70	6.50	11.00	12.00
TNR6045S-R82□TF	0.82	N / M	0.010	140	5.90	6.50	10.35	11.00
TNR6045S-1R0□TF	1.0	N / M	0.014	100	5.14	5.60	9.85	10.00
TNR6045S-1R2□TF	1.2	N / M	0.013	100	5.40	5.90	8.35	9.10
TNR6045S-1R3□TF	1.3	N / M	0.013	100	5.40	5.90	8.35	9.10
TNR6045S-1R5□TF	1.5	N / M	0.016	65	4.95	5.40	8.80	9.70
TNR6045S-1R8□TF	1.8	N / M	0.016	74	4.95	5.40	7.60	8.40
TNR6045S-2R2□TF	2.2	N / M	0.023	52	4.60	5.00	6.75	7.40
TNR6045S-2R3□TF	2.3	N / M	0.027	60	3.50	3.80	6.00	6.60
TNR6045S-2R7□TF	2.7	N / M	0.020	38	4.30	4.70	5.75	6.30
TNR6045S-3R0□TF	3.0	N / M	0.026	35	3.80	4.20	5.60	6.20
TNR6045S-3R3□TF	3.3	N / M	0.027	32	3.70	4.00	5.90	6.20
TNR6045S-3R6□TF	3.6	N / M	0.027	28	3.70	4.00	5.25	5.70
TNR6045S-4R3MTF	4.3	M	0.030	23	3.50	3.80	4.45	4.90
TNR6045S-4R5MTF	4.5	M	0.034	24	3.30	3.60	4.97	5.50
TNR6045S-4R7MTF	4.7	M	0.034	24	3.30	3.60	4.97	5.50
TNR6045S-5R1MTF	5.1	M	0.034	23	3.30	3.60	4.40	4.80
TNR6045S-5R6MTF	5.6	M	0.038	23	3.15	3.40	4.15	4.60
TNR6045S-6R2MTF	6.2	M	0.040	26	3.00	3.30	4.43	4.80
TNR6045S-6R3MTF	6.3	M	0.040	26	3.00	3.30	4.43	4.70
TNR6045S-6R8MTF	6.8	M	0.040	20	3.00	3.30	3.90	4.30
TNR6045S-7R5MTF	7.5	M	0.044	18	2.90	3.20	3.50	3.80
TNR6045S-8R2MTF	8.2	M	0.060	21	2.60	2.80	3.90	4.30
TNR6045S-9R1MTF	9.1	M	0.056	17	2.60	2.80	3.35	3.70
TNR6045S-100MTF	10	M	0.062	15	2.45	2.70	3.20	3.50
TNR6045S-120MTF	12	M	0.075	13	2.20	2.40	2.80	3.00
TNR6045S-150MTF	15	M	0.088	12	2.05	2.20	2.50	2.70
TNR6045S-180MTF	18	M	0.105	10	1.85	2.00	2.20	2.40
TNR6045S-220MTF	22	M	0.116	10	1.80	2.00	2.05	2.20
TNR6045S-270MTF	27	M	0.133	9.2	1.65	1.80	1.90	2.10
TNR6045S-300MTF	30	M	0.172	7.8	1.50	1.60	1.70	1.80
TNR6045S-330MTF	33	M	0.178	7.8	1.45	1.60	1.65	1.80
TNR6045S-360MTF	36	M	0.225	7.8	1.40	1.50	1.62	1.80
TNR6045S-390MTF	39	M	0.234	7.8	1.25	1.40	1.50	1.60
TNR6045S-430MTF	43	M	0.260	7.7	1.20	1.30	1.63	1.80
TNR6045S-470MTF	47	M	0.260	6.4	1.20	1.30	1.40	1.50
TNR6045S-510MTF	51	M	0.269	6.4	1.15	1.20	1.35	1.50

ELECTRICAL CHARACTERISTICS 特性规格表

TNR6045 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz,1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR6045S-560MTF	56	M	0.287	6.4	1.10	1.20	1.30	1.40
TNR6045S-620MTF	62	M	0.306	6.4	1.10	1.20	1.25	1.40
TNR6045S-680MTF	68	M	0.376	6.4	1.00	1.10	1.20	1.30
TNR6045S-750MTF	75	M	0.397	5	0.95	1.00	1.15	1.20
TNR6045S-820MTF	82	M	0.500	4.9	0.90	0.99	1.05	1.10
TNR6045S-910MTF	91	M	0.467	4.9	0.85	0.94	1.00	1.10
TNR6045S-101MTF	100	M	0.563	4.2	0.80	0.88	0.95	1.00
TNR6045S-121MTF	120	M	0.629	4.2	0.77	0.85	0.85	0.94
TNR6045S-151MTF	150	M	0.754	4.2	0.70	0.77	0.80	0.88
TNR6045S-221MTF	220	M	1.084	3.5	0.59	0.65	0.70	0.77
TNR6045S-331MTF	330	M	1.651	2.8	0.57	0.63	0.57	0.63
TNR6045S-471MTF	470	M	2.340	2	0.42	0.48	0.50	0.56
TNR6045S-681MTF	680	M	3.250	1.7	0.33	0.38	0.42	0.46
TNR6045S-102MTF	1000	M	5.850	1.3	0.30	0.35	0.30	0.35

TNR8040 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz,1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR8040S-R82□TF	0.82	N / M	0.010	94	6.30	6.90	13.80	16.00
TNR8040S-1R0□TF	1.0	N / M	0.010	89	6.30	6.90	9.85	14.00
TNR8040S-1R2□TF	1.2	N / M	0.013	59	5.65	6.20	10.00	14.00
TNR8040S-1R5□TF	1.5	N / M	0.013	67	5.65	6.20	8.15	11.00
TNR8040S-2R0□TF	2.0	N / M	0.016	43	5.15	5.60	9.25	10.00
TNR8040S-2R2□TF	2.2	N / M	0.016	41	5.15	5.60	7.10	8.00
TNR8040S-3R0□TF	3.0	N / M	0.018	32	4.70	5.20	6.10	7.00
TNR8040S-3R3□TF	3.3	N / M	0.022	27	4.40	4.80	6.50	7.00
TNR8040S-3R6□TF	3.6	N / M	0.022	30	4.35	4.80	7.52	8.50
TNR8040S-3R9□TF	3.9	N / M	0.022	26	4.35	4.80	5.75	6.50
TNR8040S-4R7□TF	4.7	N / M	0.025	24	4.10	4.50	5.90	6.50
TNR8040S-5R1□TF	5.1	N / M	0.025	22	4.05	4.40	4.70	5.40
TNR8040S-5R6□TF	5.6	N / M	0.027	24	3.85	4.20	6.00	6.90
TNR8040S-6R2□TF	6.2	N / M	0.027	20	3.85	4.20	4.45	5.10
TNR8040S-6R8MTF	6.8	M	0.031	20	3.60	4.00	4.55	5.20
TNR8040S-8R2MTF	8.2	M	0.034	17	3.45	3.80	4.20	4.80
TNR8040S-100MTF	10	M	0.038	15	3.30	3.60	3.60	4.10
TNR8040S-120MTF	12	M	0.053	13	2.80	3.00	3.50	4.00

ELECTRICAL CHARACTERISTICS 特性规格表

TNR8040 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz,1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR8040S-150MTF	15	M	0.061	12	2.60	2.80	2.95	3.40
TNR8040S-180MTF	18	M	0.069	11	2.40	2.60	2.70	3.10
TNR8040S-220MTF	22	M	0.090	9.5	2.10	2.30	2.40	2.70
TNR8040S-270MTF	27	M	0.101	9.2	2.00	2.20	2.15	2.50
TNR8040S-330MTF	33	M	0.126	7.8	1.80	2.00	2.05	2.40
TNR8040S-360MTF	36	M	0.133	7.8	1.75	1.90	2.00	2.30
TNR8040S-390MTF	39	M	0.139	7.8	1.70	1.90	1.95	2.20
TNR8040S-430MTF	43	M	0.147	7.8	1.65	1.80	1.90	2.20
TNR8040S-470MTF	47	M	0.177	6.4	1.55	1.70	1.75	2.00
TNR8040S-510MTF	51	M	0.185	6.4	1.50	1.60	1.70	1.90
TNR8040S-560MTF	56	M	0.192	6.4	1.45	1.60	1.55	1.70
TNR8040S-620MTF	62	M	0.237	6.4	1.30	1.40	1.50	1.60
TNR8040S-680MTF	68	M	0.255	4.9	1.25	1.40	1.45	1.60
TNR8040S-750MTF	75	M	0.274	4.9	1.20	1.30	1.35	1.50
TNR8040S-820MTF	82	M	0.293	5.9	1.15	1.20	1.30	1.40
TNR8040S-910MTF	91	M	0.354	4.9	1.05	1.10	1.20	1.30
TNR8040S-101MTF	100	M	0.377	4.2	1.00	1.10	1.15	1.30
TNR8040S-121MTF	120	M	0.434	3.5	0.95	1.00	1.05	1.10
TNR8040S-151MTF	150	M	0.533	3.5	0.85	0.94	1.10	1.20
TNR8040S-181MTF	180	M	0.676	3.5	0.83	0.92	0.95	1.15
TNR8040S-221MTF	220	M	0.779	3.5	0.80	0.88	0.85	0.94
TNR8040S-331MTF	330	M	1.156	2.8	0.64	0.70	0.68	0.75
TNR8040S-471MTF	470	M	1.625	2.1	0.50	0.60	0.60	0.70

ELECTRICAL CHARACTERISTICS 特性规格表

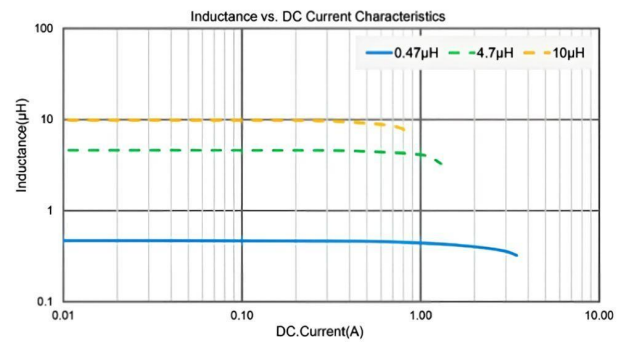
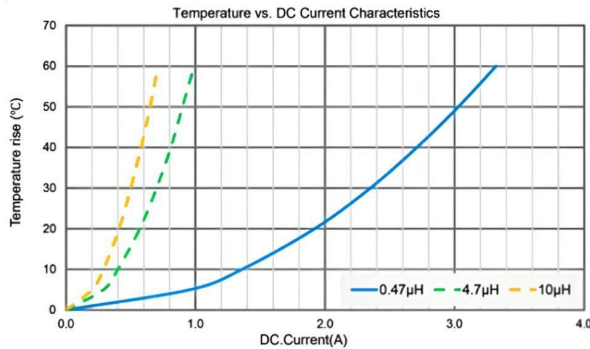
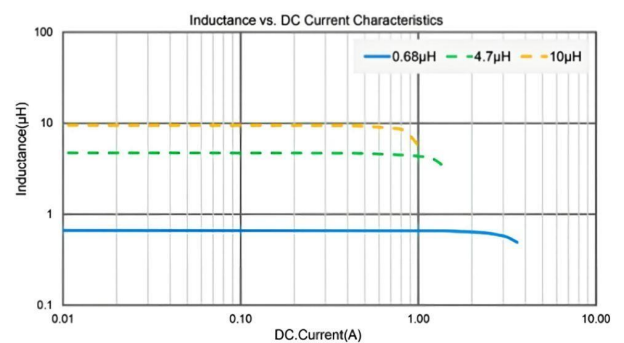
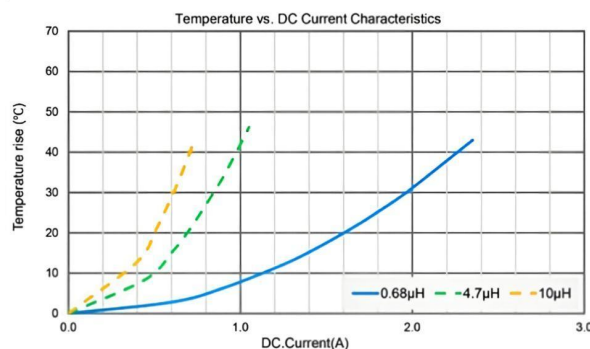
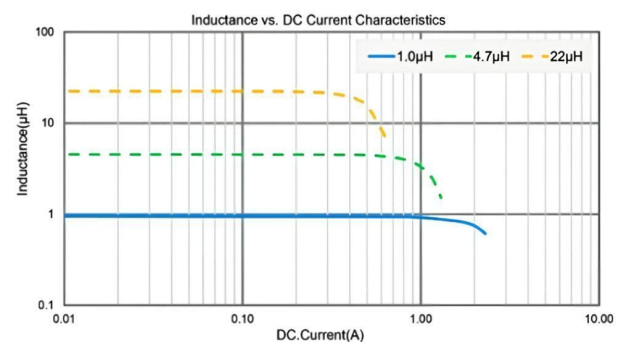
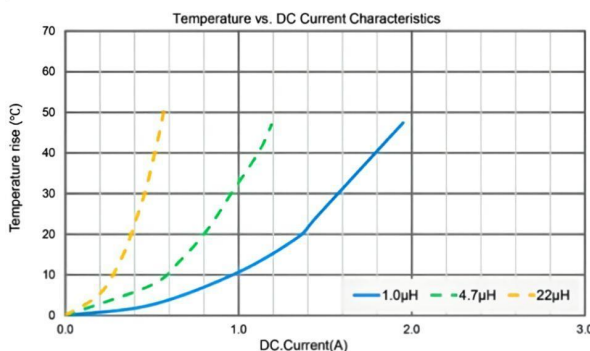
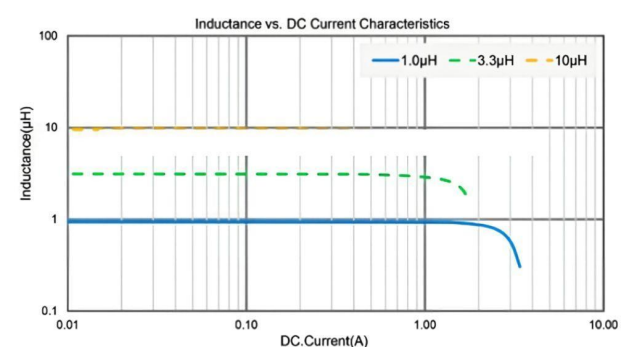
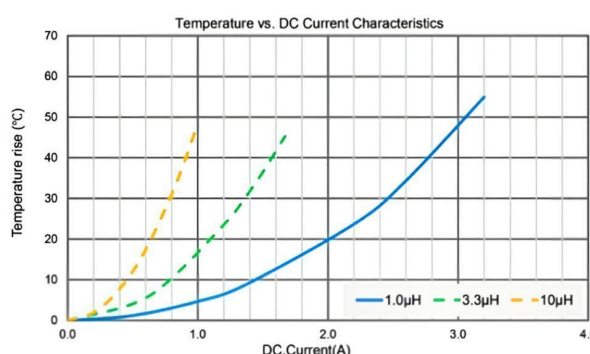
● TNR8065 Series

Part Number	Inductance	Inductance Tolerance	DC Resistance	Self-resonant Frequency	Heat Rating Current		Saturation Current	
	@100kHz, 1V		Max.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	M=±20% N=±30%	Ω	MHz	A		A	
Symbol	L		DCR	S.R.F	Irms		Isat	
TNR8065S-R68MTF	0.68	M	0.008	100	7.50	8.50	24.00	26.00
TNR8065S-1R0MTF	1	M	0.011	96	7.00	8.00	20.00	22.00
TNR8065S-2R2MTF	2.2	M	0.016	45	5.20	4.50	13.80	12.00
TNR8065S-3R3MTF	3.3	M	0.018	27	5.10	5.90	9.50	10.00
TNR8065S-4R7MTF	4.7	M	0.022	18	4.70	5.40	8.50	9.50
TNR8065S-5R6MTF	5.6	M	0.026	17	4.50	5.20	8.00	9.00
TNR8065S-6R8MTF	6.8	M	0.026	16	4.50	5.20	7.50	8.00
TNR8065S-8R2MTF	8.2	M	0.031	15	4.20	4.80	7.00	7.70
TNR8065S-100MTF	10	M	0.044	13	3.20	3.70	8.00	8.90
TNR8065S-150MTF	15	M	0.053	10	3.25	3.75	5.70	6.70
TNR8065S-220MTF	22	M	0.072	8	2.70	3.10	4.30	4.80
TNR8065S-470MTF	47	M	0.152	7	1.85	2.15	3.40	3.70
TNR8065S-560MTF	56	M	0.198	6	1.35	1.55	3.20	3.70
TNR8065S-680MTF	68	M	0.218	5	1.55	1.80	2.70	3.20
TNR8065S-101MTF	100	M	0.280	3.1	1.35	1.45	2.00	2.40
TNR8065S-151MTF	150	M	0.440	2.5	0.95	1.10	1.60	2.00
TNR8065S-221MTF	220	M	0.656	2	0.80	0.90	1.20	1.50
TNR8065S-331MTF	330	M	0.840	1.7	0.75	0.85	1.00	1.20
TNR8065S-471MTF	470	M	1.560	1.4	0.55	0.65	1.00	1.20
TNR8065S-681MTF	680	M	1.944	1	0.52	0.60	0.85	1.00
TNR8065S-102MTF	1000	M	2.820	1.1	0.40	0.45	0.65	0.73

- All test data is referenced to 20°C ambient.
- Rated current: Isat or Irms, whichever is smaller.
- Isat: DC current at which the inductance drops approximate 30% from its value without current.
- Irms: DC current that causes the temperature rise ($\Delta T = 40^{\circ}\text{C}$) from 20°C ambient.

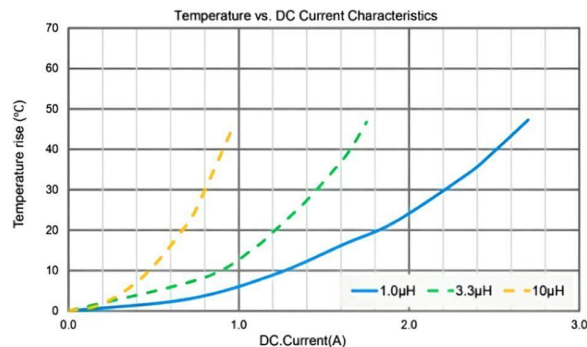
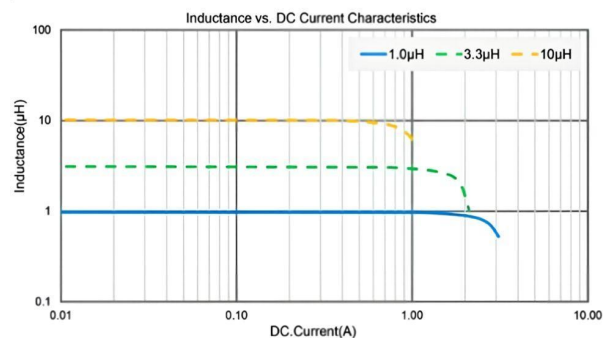
STRUCTURE 结构

No.	Components	Material
1	Ferrite Core	Ni-Zn Ferrite
2	Wire	Polyurethane system enameled copper wire
3	Magnetic Glue	Epoxy resin and magnetic powder
4	Electrodes	Sn Alloy

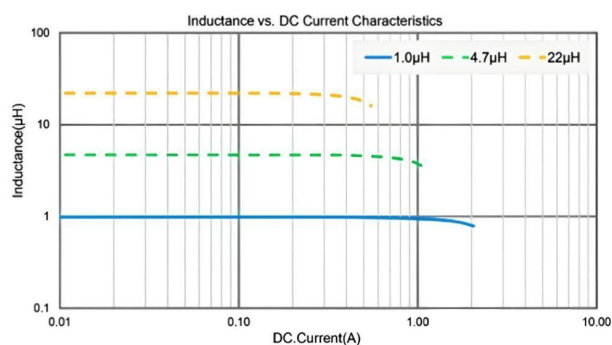
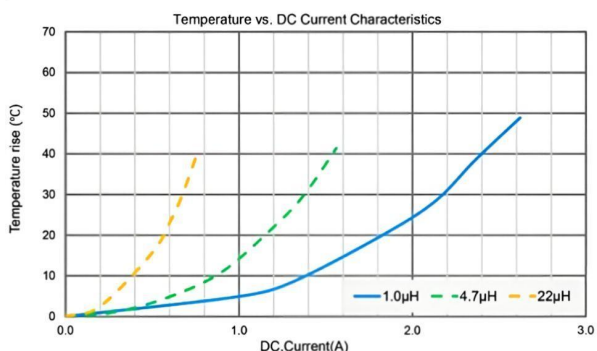
CHARACTERISTICS(REFERENCE) 特征曲线
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TNR252012 Series

TNR3010 Series

TNR3012 Series


CHARACTERISTICS(REFERENCE) 特征曲线

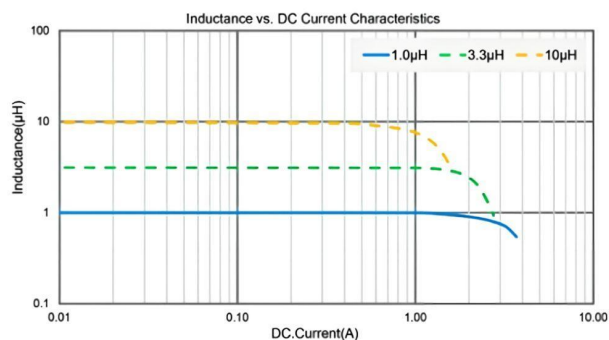
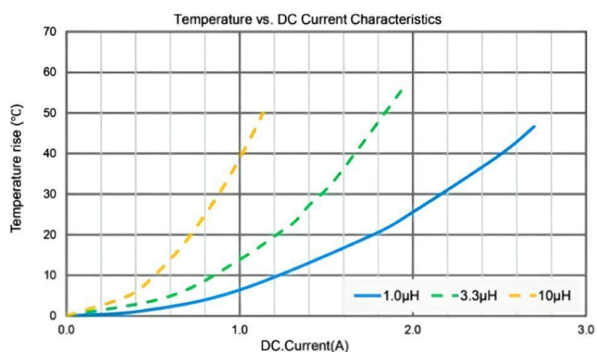
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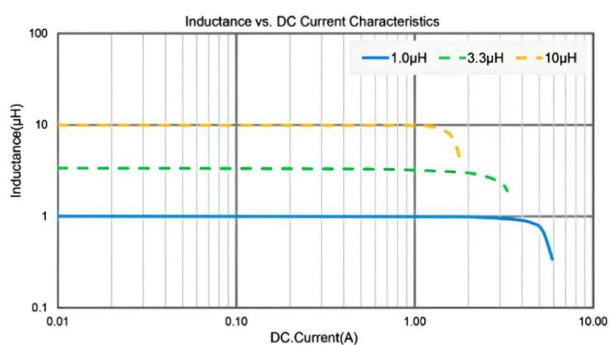
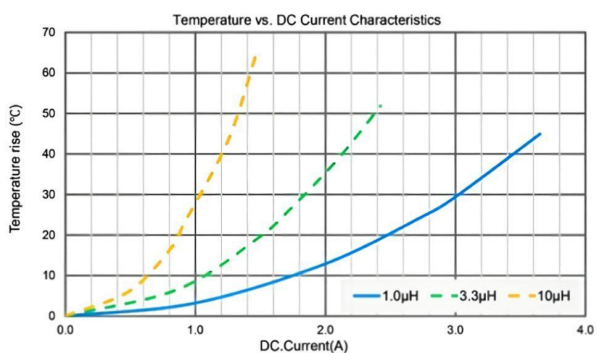
TNR4010 Series



TNR4012 Series

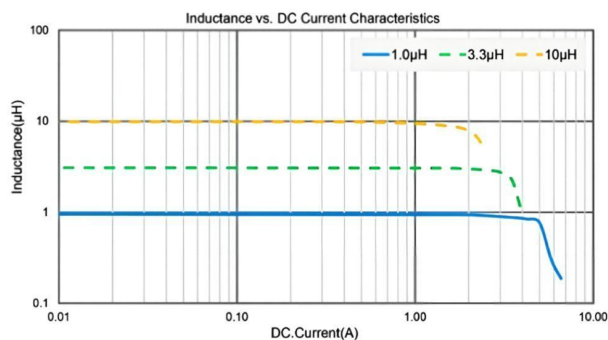
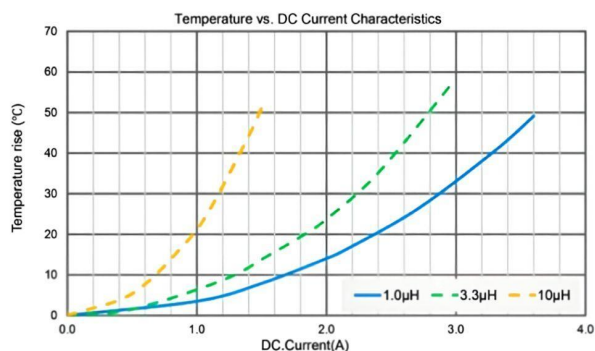


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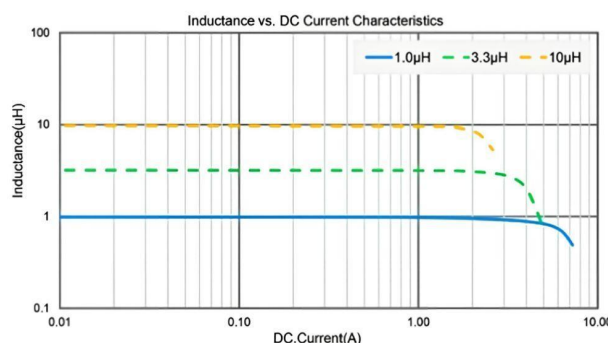
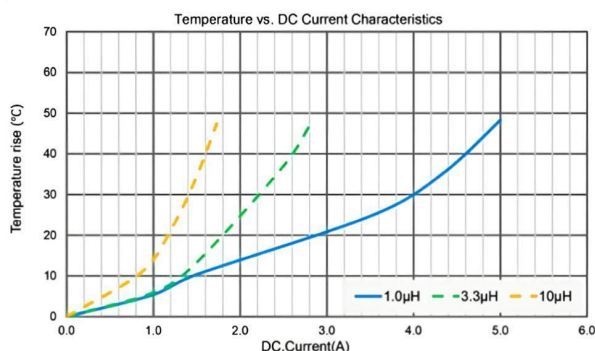


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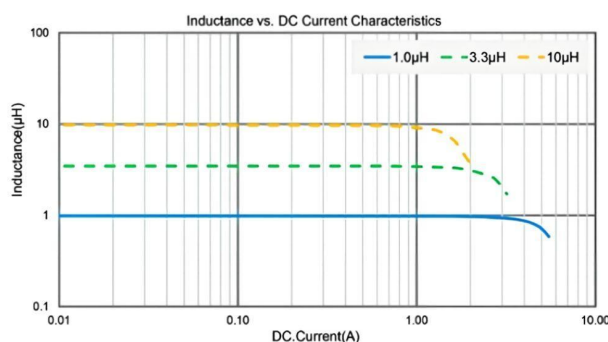
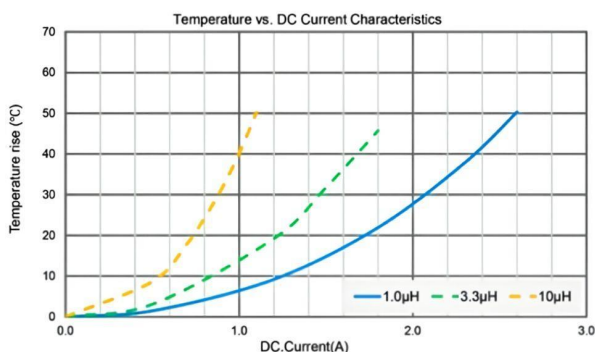
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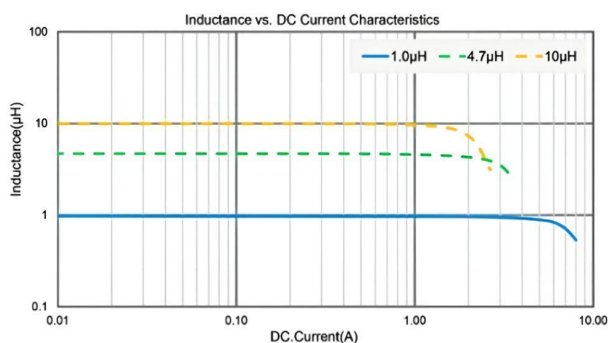
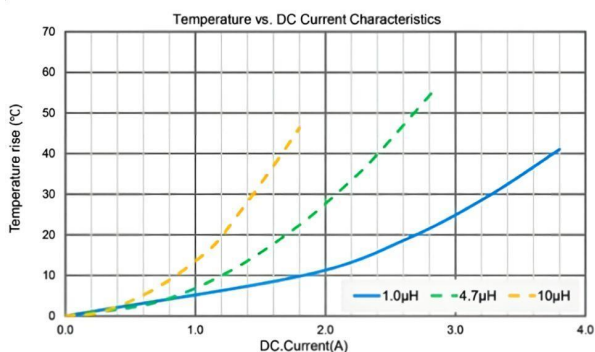
TNR4030 Series



TNR5012 Series

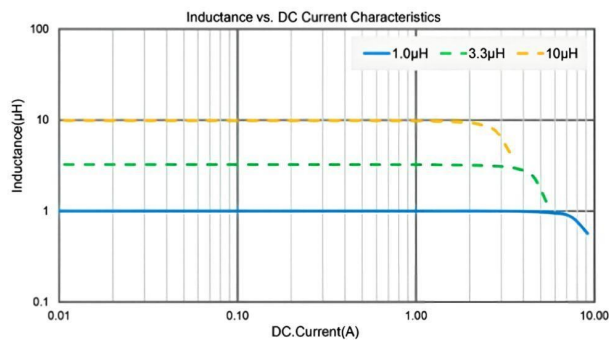
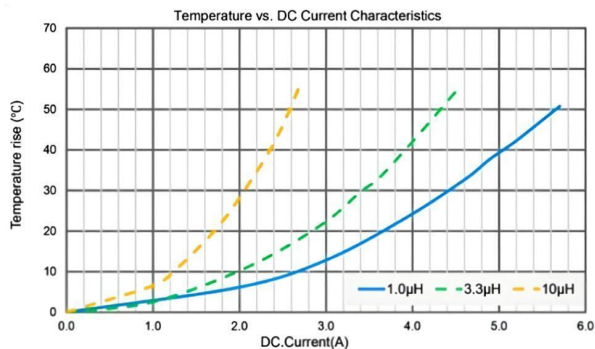


TNR5020 Series

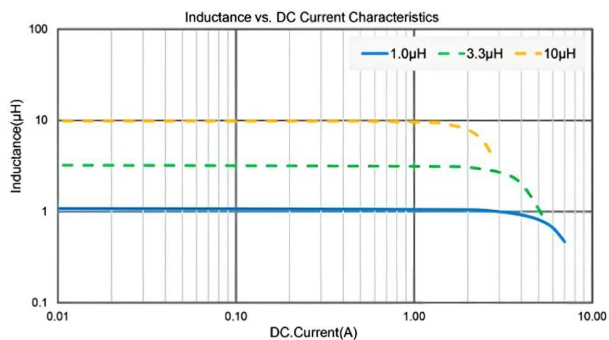
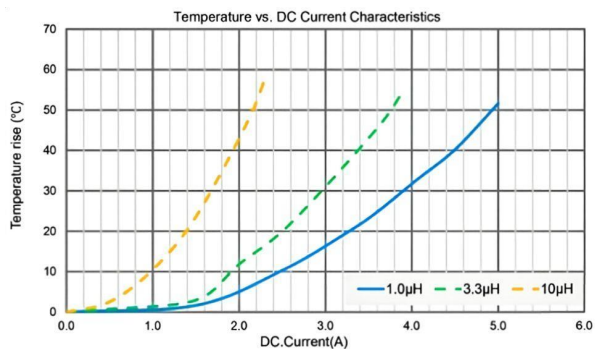


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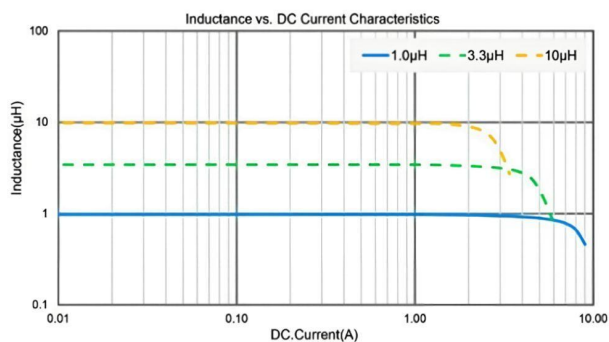
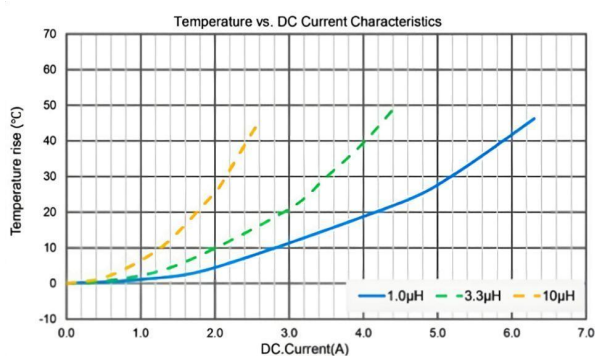
TNR5040 Series



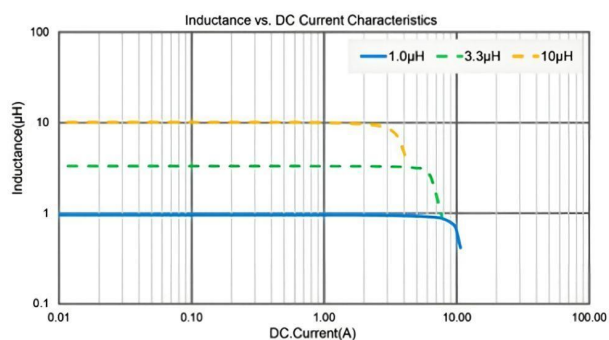
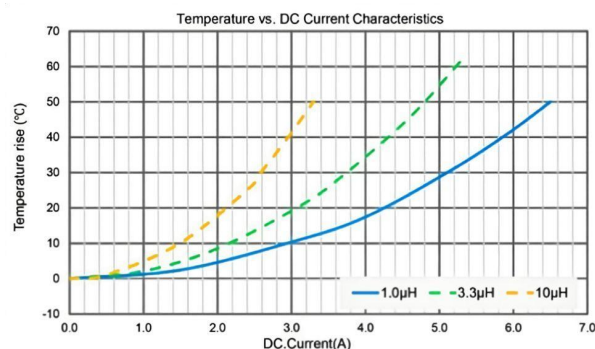
TNR6020 Series



TNR6028 Series

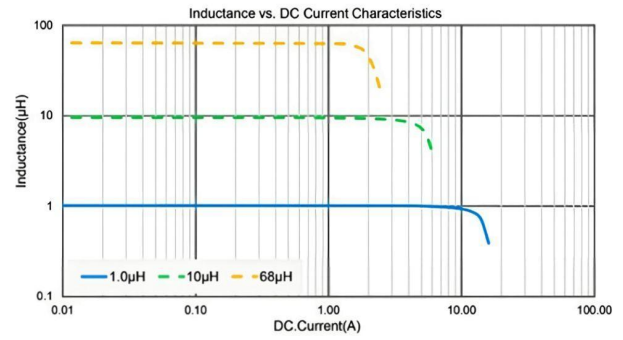
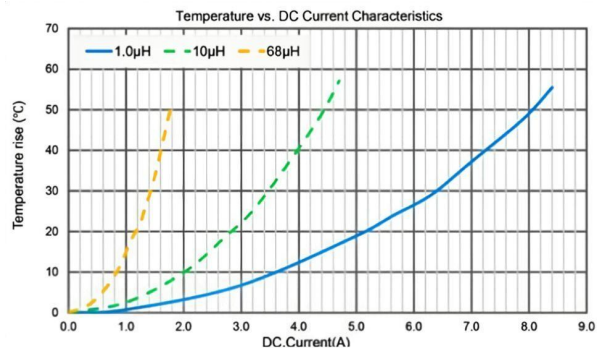


TNR6045 Series

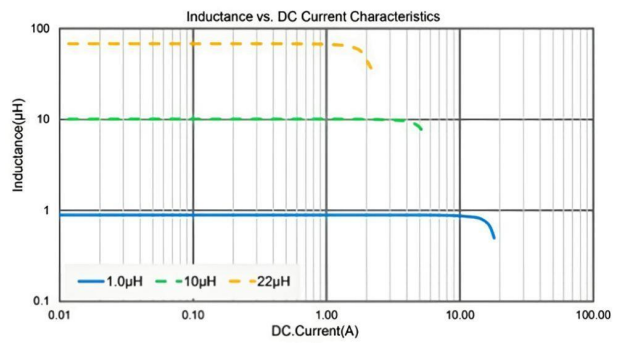
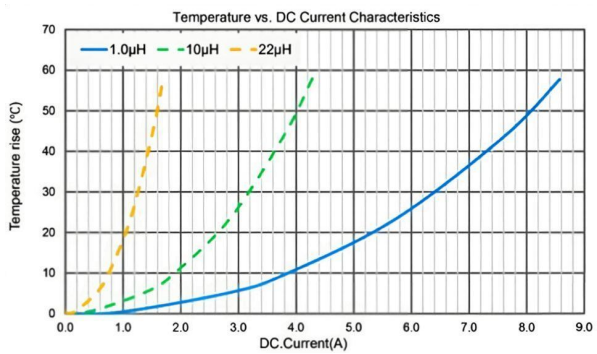


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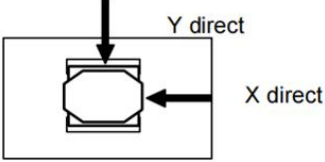
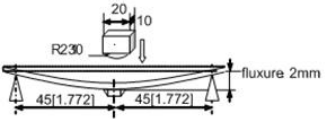
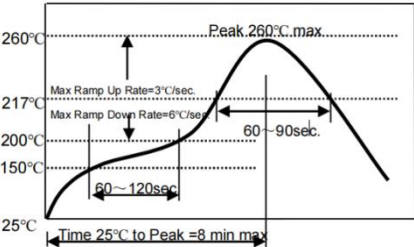
● TNR8040 Series



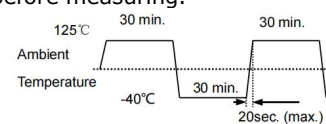
● TNR8065 Series



RELIABILITY TEST 可靠性试验

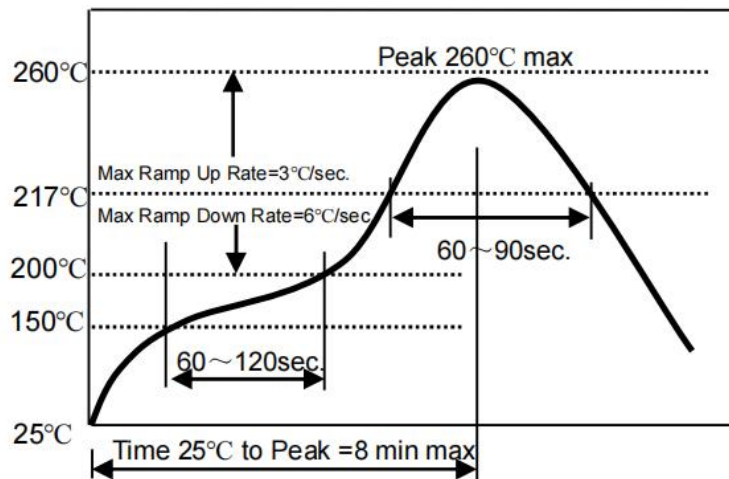
Items	Requirements	Test Methods and Remarks
Terminal Strength	No removal or split of the termination or other defects shall occur. 	1.Solder the inductor to the testing jig (glass epoxy board shown in) using eutectic solder. Then apply a force in the direction of the arrow. 2.10N force. 3.Keep time: 5s
Resistance to Flexure	No visible mechanical damage. 	1.Solder the chip to the test jig (glass epoxy board) using eutectic solder. Then apply a force in the direction shown as. 2.Flexure: 2mm. 3.Pressurizing Speed: 0.5mm/sec. 4.Keep time: 30±1s.
Vibration	1.No visible mechanical damage. 2.Inductance change: Within ±10%	1.Solder the chip to the testing jig (glass epoxy board shown as the following figure) using eutectic solder. 2.The chip shall be subjected to a simple harmonic motion having total amplitude of 1.5mm, the frequency being varied uniformly between the approximate limits of 10 and 55 Hz. 3.The frequency range from 10 to 55 Hz and return to 10 Hz shall be traversed in approximately 1 minute. This motion shall be applied for a period of 2 hours in each 3 mutually perpendicular directions (total of 6 hours).
Temperature coefficient	Inductance change: Within ±20%	1.Temperature: -40℃~+125℃ 2.With a reference value of +20℃, change rate shall be calculated.
Solderability	90% or more of electrode area shall be coated by new solder.	1.The test samples shall be dipped in flux, and then immersed in molten solder. 2.Solder temperature: 245±5℃ 3.Duration: 5±1 sec. 4.Solder: Sn/3.0Ag/0.5Cu. 5.Flux: 25% resin and 75% ethanol in weight. 6.Immersion depth: all sides of mounting terminal shall be immersed.
Resistance to Soldering Heat	1.No visible mechanical damage. 2.Inductance change: Within ±10%.	1.Re-flowing Profile: Please refer to the figure below. 2.Test board thickness: 1.0mm. 3.Test board material: glass epoxy resin. 4.The chip shall be stabilized at normal condition for 1~2 hours before measuring. 

RELIABILITY TEST 可靠性试验

Items	Requirements	Test Methods and Remarks
Thermal Shock	1.No visible mechanical damage. 2.Inductance change: Within $\pm 10\%$.	1.Temperature and time: $-40\pm 3^{\circ}\text{C}$ for 30 ± 3 min $\rightarrow 125^{\circ}\text{C}$ for 30 ± 3 min, Please refer to the figure below. 2.Transforming interval: Max. 20 sec. 3.Tested cycle: 100 cycles. 4.The chip shall be stabilized at normal condition for 1~2 hours before measuring. 
Resistance to Low Temperature	1.No visible mechanical damage. 2.Inductance change: Within $\pm 10\%$.	1.Temperature: $-40\pm 3^{\circ}\text{C}$. 2.Duration: 1000 ± 24 hours. 3.The chip shall be stabilized at normal condition for 1~2 hours before measuring.
Resistance to High Temperature	1.No mechanical damage. 2.Inductance change: Within $\pm 10\%$.	1.Temperature: $125\pm 2^{\circ}\text{C}$. 2.Duration: 1000 ± 24 hours. 3.The chip shall be stabilized at normal condition for 1~2 hours before measuring.
Damp Heat	1.No mechanical damage. 2.Inductance change: Within $\pm 10\%$.	1.Temperature: $60\pm 2^{\circ}\text{C}$. 2.Humidity: 90% to 95%RH. 3.Duration: 1000 ± 24 hours. 4.The chip shall be stabilized at normal condition for 1~2 hours before measuring.
Loading Under Damp Heat	1.No mechanical damage. 2.Inductance change: Within $\pm 10\%$.	1.Temperature: $60\pm 2^{\circ}\text{C}$. 2.Humidity: 90% to 95% RH. 3.Applied current: Rated current. 4.Duration: 1000 ± 24 hours. 5.The chip shall be stabilized at normal condition for 1~2 hours before measuring.
Loading at High Temperature	1.No mechanical damage. 2.Inductance change: Within $\pm 10\%$.	1.Temperature: $85\pm 2^{\circ}\text{C}$. 2.Applied current: Rated current. 3.Duration: 1000 ± 24 hours. 4.The chip shall be stabilized at normal condition for 1~2 hours before measuring.

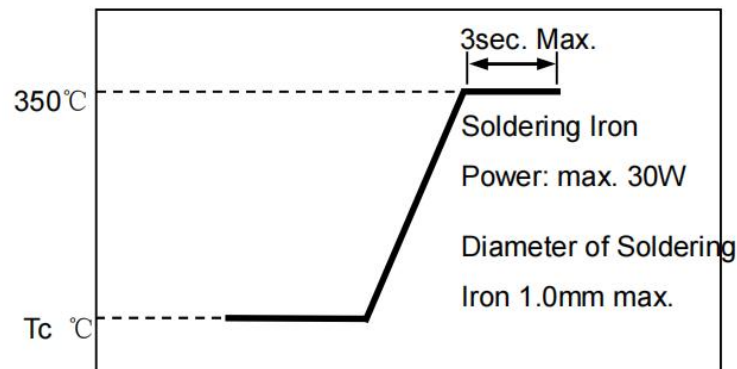
RECOMMENDED SOLDERING TECHNOLOGIES 回流焊建议

- Re-flowing Profile
- ☆ Preheat condition: 150 ~200°C/60~120sec.
- ☆ Allowed time above 217°C: 60~90sec.
- ☆ Max time at max temp: 5sec.
- ☆ Solder paste: Sn/3.0Ag/0.5Cu.
- ☆ Allowed Reflow time: 2x max.
- ☆ Please refer to the figure below.



- Note: The reflow profile in the above table is only for qualification and is not meant to specify board assembly profiles. Actual board assembly profiles must be based on the customer's specific board design, solder paste and process, and should not exceed the parameters as the Reflow profile shows.

- Iron Soldering Profile
- ☆ Iron soldering power: Max. 30W.
- ☆ Pre-heating: 150 /60sec.
- ☆ Soldering Tip temperature: 350 Max.
- ☆ Soldering time: 3sec. Max.
- ☆ Solder paste: Sn/3.0Ag/0.5Cu.
- ☆ Max.1 times for iron soldering
- ☆ Please refer to the figure below.



- Note: Take care not to apply the tip of the soldering iron to the terminal electrodes.

■ PRECAUTIONS ON USE 使用注意事项

● Precautions.

● 1.Surface mounting

☆ Mounting and soldering condition should be checked beforehand.

☆ Applicable soldering process to this product is reflow soldering only.

☆ Recommended conditions for repair by soldering iron:

Preheat the circuit board with product to repair at 150℃ for about 1 minute.

Put soldering iron on the land-pattern.

Soldering iron's temperature: 350℃ maximum/Duration: 3 seconds maximum/1 time for each terminal.

The soldering iron should not directly touch the inductor.

Product once removes from the circuit board may not be used again.Put soldering iron on the land-pattern.

● 2.Handing

☆ Keep the products away from all magnets and magnetic objects.

☆ Be careful not to subject the products to excessive mechanical shocks.

☆ Please avoid applying impact to the products after mounted on pc board.

☆ Avoid ultrasonic processing, which may cause component falling off and poor pad contact.

● 3.Storage

☆ To maintain the solderability of terminal electrodes and to keep the packing material in good condition, temperature and humidity in the storage area should be controlled.

☆ Recommended conditions: -10℃~40℃, 70%RH (Max.)

☆ Even under ideal storage conditions, solderability of products electrodes may decrease as time passes. For this reason, product should be used with one year from the time of delivery.

☆ In case of storage over 6 months, solderability shall be checked before actual usage.

● 4.Guarantee

☆ The guaranteed operating conditions of the products are in accordance with the conditions specified in this specification.

☆ Please note that APV takes no responsibility for any failure and/or abnormality which is caused by use under other than the aforesaid operating conditions.

■ SAFETY REMINDERS 注意事项

SAFETY REMINDERS

● All products listed in this specification are developed, designed and intended for use in general electronics equipment. The products are not designed or Warranted to meet the requirements of the applications listed below, whose performance and/or quality require especially high reliability, or whose failure, malfunction or trouble might directly cause damage to society, person, or property. Please understand that we are not responsible for any damage or liability caused by use of the products in any of the applications below. Please contact us for more details if you intend to use our products in the following applications.

- ☆ 1. Aerospace/aviation equipment
- ☆ 2. Transportation equipment (cars, electric trains, ships, etc.)
- ☆ 3. Medical equipment
- ☆ 4. Power-generation control equipment
- ☆ 5. Atomic energy-related equipment
- ☆ 6. Seabed equipment
- ☆ 7. Transportation control equipment
- ☆ 8. Public information-processing equipment
- ☆ 9. Military equipment
- ☆ 10. Electric heating apparatus, burning equipment
- ☆ 11. Disaster prevention/crime prevention equipment
- ☆ 12. Safety equipment
- ☆ 13. Other applications that are not considered general-purpose applications

● When designing your equipment even for general-purpose applications, you are kindly requested to take into consideration securing protection circuit/device or providing backup circuits in your equipment.