

Features

- Magnetic-resin shielded construction reduces buzz noise to ultra-low levels
- Metallization on ferrite core results in excellent shock resistance and damage-free durability
- Tiny power inductor design
- Closed magnetic circuit design reduces leakage flux and Electro Magnetic Interference (EMI)
- Takes up less PCB real estate and save more power
- 30% lower DCR and larger current
- Operating temperature: -40°C to +125°C



Application

- DC/DC converters for high current power supplies
- Portable power like Smart Phone, PDA, digital camera
- Embedded laptops and PCs

Product Identification

KNR 5012 - 2R2 M □□□
 ① ② ③ ④ ⑤

①	Type
KNR	Wire Wound SMD Power Inductor

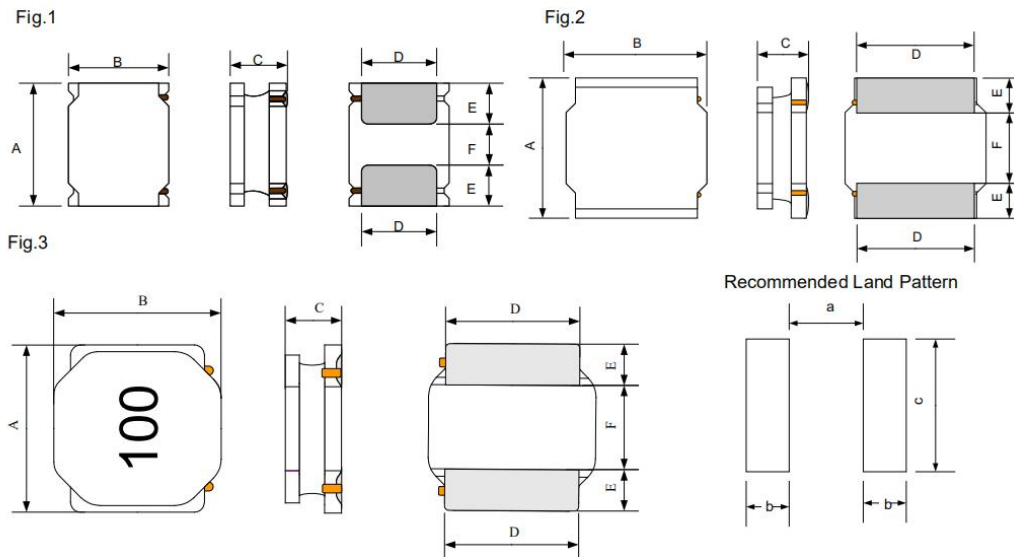
③	Nominal Inductance
example	Nominal Value
R47	0.47uH
2R2	2.2 uH

④	Inductance Tolerance
example	Nominal Value
K	±10%
M	±20%
N	±30%

②	External Dimensions (L×W×H) [mm]
5012	5.0x5.0x1.2
5020	5.0x5.0x2.0
5040	5.0x5.0x4.0
6020	6.0x6.0x2.0
6028	6.0x6.0x2.8
6045	6.0x6.0x4.5
8050	8.0x8.0x5.0
8060	8.0x8.0x6.0
8065	8.0x8.0x6.5

⑤	Design Code
□□□	Standard product is blank

SHAPE AND DIMENSIONS



Unite:mm

Series	Shape	A	B	C	D	E	F	a Typ.	b Typ.	c Typ.
KNR5012	Fig.3	5.0±0.2	5.0±0.2	1.2 Max.	4.0±0.2	1.25±0.2	2.5±0.2	2.3	1.4	4.2
KNR5020	Fig.3	5.0±0.2	5.0±0.2	2.0 Max.	4.0±0.2	1.25±0.2	2.5±0.2	2.3	1.4	4.2
KNR5040	Fig.3	5.0±0.2	5.0±0.2	4.0 Max.	4.0±0.2	1.25±0.2	2.5±0.2	2.3	1.4	4.2
KNR5045	Fig.3	5.0±0.2	5.0±0.2	4.5 Max.	4.0±0.2	1.30±0.2	2.5±0.2	2.3	1.4	4.2
KNR6020	Fig.2	6.0±0.3	6.0±0.3	2.0 Max.	4.9±0.3	1.55±0.3	2.9±0.3	2.8	1.7	5.7
KNR6028	Fig.2	6.0±0.3	6.0±0.3	2.8 Max.	4.9±0.3	1.55±0.3	2.9±0.3	2.8	1.7	5.7
KNR6040	Fig.2	6.0±0.3	6.0±0.3	4.0 Max.	4.9±0.3	1.55±0.3	2.9±0.3	2.8	1.7	5.7
KNR6045	Fig.2	6.0±0.3	6.0±0.3	4.5 Max.	4.9±0.3	1.55±0.3	2.9±0.3	2.8	1.7	5.7
KNR8050	Fig.3	8.0±0.3	8.0±0.3	5.0 Max.	6.3±0.3	2.00±0.3	4.0±0.3	3.8	2.2	7.5
KNR8060	Fig.3	8.0±0.3	8.0±0.3	6.0 Max.	6.3±0.3	2.00±0.3	4.0±0.3	3.8	2.2	7.5
KNR8065	Fig.3	8.0±0.3	8.0±0.3	6.5 Max.	6.3±0.3	2.00±0.3	4.0±0.3	3.8	2.2	7.5

SPECIFICATIONS

KNR5012 Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@100kHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
KNR5012-R22NT	0.22±30%	0.034	0.028	315	8.10	9.30	3.00	3.30
KNR5012-R47NT	0.47±30%	0.046	0.035	184	6.00	7.00	2.80	3.30
KNR5012-R68NT	0.68±30%	0.057	0.044	213	3.30	3.80	2.40	2.80
KNR5012-1R0NT	1.0±30%	0.068	0.057	103	4.40	4.70	2.00	2.40
KNR5012-1R2NT	1.2±30%	0.068	0.057	96	2.45	3.40	2.00	2.40

KNR5012-1R5NT	1.5±30%	0.086	0.072	68	3.70	3.80	1.90	2.20
KNR5012-2R2NT	2.2±30%	0.108	0.090	50	3.10	3.20	1.70	2.00
KNR5012-3R3NT	3.3±30%	0.151	0.126	34	2.40	2.60	1.40	1.70
KNR5012-4R7NT	4.7±30%	0.197	0.164	31	2.20	2.30	1.30	1.50
KNR5012-6R8MT	6.8±20%	0.294	0.245	22	1.70	1.90	1.00	1.20
KNR5012-100MT	10±20%	0.413	0.344	17	1.40	1.50	0.85	1.00
KNR5012-150MT	15±20%	0.523	0.436	13	1.20	1.30	0.80	0.92
KNR5012-220MT	22±20%	0.858	0.780	16	0.88	0.98	0.60	0.68
KNR5012-101MT	100±20%	3.536	2.720	7.6	0.38	0.47	0.33	0.38

KNR5020 Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@100kHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	µH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
KNR5020-R22NT	0.22±30%	0.011	0.009	280	9.00	12.00	5.30	6.00
KNR5020-R24NT	0.24±30%	0.011	0.009	248	8.00	10.00	5.30	6.00
KNR5020-R47NT	0.47±30%	0.017	0.013	160	6.15	6.70	4.60	5.00
KNR5020-R56NT	0.56±30%	0.022	0.017	137	8.50	9.60	3.80	4.20
KNR5020-R68NT	0.68±30%	0.022	0.017	120	5.50	6.00	4.00	4.40
KNR5020-R75NT	0.75±30%	0.022	0.017	117	5.50	6.00	4.00	4.40
KNR5020-1R0NT	1.0±30%	0.026	0.020	114	4.10	5.00	3.80	4.10
KNR5020-1R2NT	1.2±30%	0.029	0.022	83	4.50	4.90	3.55	3.90
KNR5020-1R5NT	1.5±30%	0.034	0.026	68	4.10	4.50	3.20	3.50
KNR5020-2R2NT	2.2±30%	0.042	0.032	57	3.20	4.00	2.90	3.10
KNR5020-2R7NT	2.7±30%	0.049	0.038	52	2.90	3.50	2.70	2.90
KNR5020-3R0NT	3.0±30%	0.049	0.038	49	2.55	2.80	2.70	2.90
KNR5020-3R3NT	3.3±30%	0.056	0.043	46	2.55	3.00	2.50	2.70
KNR5020-3R6NT	3.6±30%	0.056	0.043	43	2.80	3.00	2.50	2.70
KNR5020-3R9NT	3.9±30%	0.056	0.043	40	2.30	2.80	2.50	2.70
KNR5020-4R3MT	4.3±20%	0.074	0.057	37	2.50	3.00	2.20	2.40
KNR5020-4R7MT	4.7±20%	0.074	0.057	37	2.50	2.70	2.20	2.40
KNR5020-5R1MT	5.1±20%	0.083	0.064	32	2.25	2.60	2.05	2.20
KNR5020-5R6MT	5.6±20%	0.083	0.064	32	2.30	2.50	2.05	2.20
KNR5020-6R8MT	6.8±20%	0.108	0.083	30	2.05	2.20	1.80	1.90
KNR5020-7R5MT	7.5±20%	0.117	0.090	26	1.85	2.00	1.75	1.90
KNR5020-8R2MT	8.2±20%	0.127	0.098	26	1.85	2.00	1.65	1.80
KNR5020-9R1MT	9.1±20%	0.143	0.110	24	1.70	1.80	1.55	1.70
KNR5020-100MT	10±20%	0.143	0.110	24	1.70	1.80	1.55	1.70
KNR5020-120MT	12±20%	0.182	0.140	22	1.50	1.60	1.40	1.50
KNR5020-150MT	15±20%	0.215	0.165	20	1.35	1.40	1.25	1.30
KNR5020-180MT	18±20%	0.260	0.20	16	1.25	1.30	1.15	1.20

KNR5020-220MT	22±20%	0.294	0.226	14	1.15	1.20	1.10	1.20
KNR5020-330MT	33±20%	0.507	0.390	10	0.92	1.00	0.90	0.99
KNR5020-470MT	47±20%	0.680	0.523	7	0.77	0.84	0.77	0.84
KNR5020-560MT	56±20%	0.819	0.630	6	0.77	0.84	0.70	0.77
KNR5020-620MT	62±20%	0.819	0.630	6	0.60	0.80	0.70	0.77
KNR5020-680MT	68±20%	0.962	0.740	6	0.65	0.70	0.64	0.70
KNR5020-820MT	82±20%	1.158	0.965	6	0.65	0.75	0.50	0.60
KNR5020-101MT	100±20%	1.430	1.10	6	0.53	0.58	0.53	0.58
KNR5020-121MT	120±20%	1.755	1.350	6	0.42	0.53	0.40	0.50
KNR5020-151MT	150±20%	2.795	2.150	4	0.55	0.63	0.35	0.40
KNR5020-201MT	200±20%	2.60	2.0	4.5	0.30	0.33	0.40	0.45
KNR5020-561MT	560±20%	9.061	6.970	3.2	0.24	0.30	0.20	0.30

KNR5040 Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@100kHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	µH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
KNR5040-R22MT	0.22 ±20%	0.008	0.006	289	18.00	20.00	6.50	7.50
KNR5040-R24NT	0.24 ±30%	0.008	0.006	251	15.70	18.00	6.40	7.40
KNR5040-R47MT	0.47 ±20%	0.009	0.007	171	10.00	11.50	6.60	7.60
KNR5040-1R0NT	1.0±30%	0.016	0.012	117	7.35	8.00	4.90	5.00
KNR5040-1R2NT	1.2±30%	0.021	0.016	110	6.50	7.00	4.15	4.25
KNR5040-1R5NT	1.5±30%	0.020	0.015	86	6.30	6.80	4.30	4.85
KNR5040-1R8MT	1.8±20%	0.021	0.016	55	5.50	6.05	4.15	4.30
KNR5040-2R2NT	2.2±30%	0.025	0.019	50	4.90	5.50	3.80	4.20
KNR5040-2R7NT	2.7±30%	0.029	0.022	37	4.30	4.80	3.60	4.00
KNR5040-3R0NT	3.0±30%	0.029	0.022	37	4.15	4.60	3.60	4.00
KNR5040-3R3NT	3.3±30%	0.031	0.024	32	3.95	4.45	3.40	3.90
KNR5040-3R6MT	3.6±20%	0.034	0.026	30	3.80	4.40	3.30	3.70
KNR5040-3R9NT	3.9±30%	0.035	0.027	29	3.55	4.00	3.20	3.70
KNR5040-4R7NT	4.7±30%	0.039	0.030	28	3.50	3.80	3.00	3.30
KNR5040-5R6MT	5.6±20%	0.046	0.035	27	3.00	3.70	2.80	3.10
KNR5040-6R8MT	6.8±20%	0.056	0.043	21	2.90	3.40	2.50	2.80
KNR5040-8R2MT	8.2±20%	0.062	0.048	20	2.70	2.90	2.30	2.60
KNR5040-100MT	10±20%	0.083	0.064	18	2.35	2.70	2.10	2.35
KNR5040-120MT	12±20%	0.100	0.077	14	2.2	2.5	2.0	2.1
KNR5040-150MT	15±20%	0.112	0.086	13	2.00	2.20	2.00	2.05
KNR5040-180MT	18±20%	0.155	0.119	12	1.70	2.00	1.45	1.65
KNR5040-220MT	22±20%	0.168	0.129	11	1.60	1.80	1.50	1.60
KNR5040-270MT	27±20%	0.244	0.188	9.8	1.52	1.75	1.10	1.25
KNR5040-330MT	33±20%	0.244	0.188	9	1.30	1.45	1.20	1.35

KNR5040-470MT	47±20%	0.354	0.272	7	1.10	1.20	1.00	1.15
KNR5040-510MT	51±20%	0.494	0.380	6	1.00	1.20	1.00	1.10
KNR5040-560MT	56±20%	0.494	0.380	6	1.05	1.20	0.80	0.90
KNR5040-680MT	68±20%	0.520	0.40	6	0.90	1.00	0.80	0.90
KNR5040-750MT	75±20%	0.585	0.450	6	0.85	0.95	0.72	0.80
KNR5040-101MT	100±20%	0.728	0.560	5	0.75	0.85	0.70	0.78
KNR5040-151MT	150±20%	0.975	0.750	3.7	0.65	0.67	0.60	0.70
KNR5040-221MT	220±20%	1.820	1.40	3.0	0.48	0.55	0.40	0.50
KNR5040-301MT	300±20%	2.60	2.0	2.7	0.50	0.58	0.35	0.40
KNR5040-331MT	330±20%	2.730	2.10	2.7	0.42	0.47	0.40	0.50
KNR5040-471MT	470±20%	3.90	3.0	2.7	0.37	0.43	0.35	0.40
KNR5040-561MT	560±20%	4.920	3.780	1.3	0.31	0.36	0.31	0.35
KNR5040-681MT	680±20%	5.070	3.90	1.3	0.30	0.35	0.25	0.30
KNR5040-102MT	1000±20%	7.80	6.0	1.3	0.21	0.25	0.20	0.23
KNR5040-152MT	1500±20%	10.582	8.140	1.2	0.20	0.23	0.19	0.22
KNR5040-202MT	2000±20%	14.760	12.300	1.0	0.17	0.20	0.14	0.16
KNR5040-282MT	2800±20%	24.700	19.000	0.88	0.15	0.175	0.105	0.12
KNR5040-332MT	3300±20%	25.20	21.0	0.9	0.140	0.150	0.100	0.120
KNR5040-392MT	3900±20%	30.55	23.50	0.8	0.125	0.150	0.100	0.115
KNR5040-472MT	4700±20%	45.50	35.0	0.6	0.110	0.130	0.080	0.100
KNR5040-502MT	5000±20%	43.16	35.97	0.49	0.110	0.130	0.085	0.098
KNR5040-562MT	5600±20%	50.70	39.0	0.49	0.105	0.120	0.080	0.092
KNR5040-682MT	6800±20%	55.90	43.0	0.38	0.090	0.110	0.075	0.086
KNR5040-822MT	8200±20%	55.90	43.0	0.38	0.070	0.085	0.075	0.086
KNR5040-103MT	10000±20%	58.50	45.0	0.32	0.065	0.075	0.075	0.086

KNR5045 Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@100kHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
KNR5045-1R5MT	1.5±20%	0.022	0.017	78	7.40	8.50	5.20	5.90
KNR5045-2R2MT	2.2±20%	0.029	0.022	50	6.40	7.20	4.70	5.40
KNR5045-3R3MT	3.3±20%	0.035	0.027	36	5.20	6.00	4.20	4.85
KNR5045-3R6MT	3.6±20%	0.030	0.023	33	5.15	5.90	4.55	5.25
KNR5045-4R7MT	4.7±20%	0.047	0.036	27	5.00	5.60	3.20	3.70
KNR5045-6R8MT	6.8±20%	0.056	0.043	28	3.78	4.35	2.93	3.38
KNR5045-100MT	10±20%	0.079	0.061	17	3.20	3.70	2.50	2.90
KNR5045-220MT	22±20%	0.163	0.125	10	2.00	2.35	1.55	1.80
KNR5045-330MT	33±20%	0.256	0.213	7	1.63	1.88	1.13	1.30

KNR6020 Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@100kHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	µH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
KNR6020-R50NT	0.50±30%	0.018	0.014	120	4.50	6.00	4.00	5.00
KNR6020-R68NT	0.68±30%	0.022	0.017	115	6.55	7.80	3.80	4.80
KNR6020-R82NT	0.82±30%	0.022	0.017	110	5.30	6.30	3.80	4.80
KNR6020-1R0NT	1.0±30%	0.020	0.020	100	4.15	5.00	3.50	4.40
KNR6020-1R2NT	1.2±30%	0.029	0.022	88	5.90	7.00	3.20	4.00
KNR6020-1R5NT	1.5±30%	0.029	0.022	79	4.25	5.10	3.20	4.00
KNR6020-1R8NT	1.8±30%	0.036	0.028	68	4.85	5.80	2.75	3.50
KNR6020-2R0NT	2.0±30%	0.046	0.035	65	4.10	4.90	2.60	3.30
KNR6020-2R2NT	2.2±30%	0.036	0.028	61	3.75	4.50	2.75	3.50
KNR6020-2R7NT	2.7±30%	0.046	0.035	56	3.90	4.60	2.60	3.30
KNR6020-3R3NT	3.3±30%	0.046	0.035	51	3.15	3.70	2.60	3.30
KNR6020-3R9NT	3.9±30%	0.064	0.049	45	3.25	3.90	2.10	2.60
KNR6020-4R3NT	4.3±30%	0.064	0.049	44	2.70	3.20	2.10	2.60
KNR6020-4R7NT	4.7±30%	0.075	0.058	41	3.00	3.60	2.00	2.50
KNR6020-5R6NT	5.6±30%	0.075	0.058	36	2.40	2.90	1.90	2.40
KNR6020-6R2NT	6.2±30%	0.103	0.079	31	2.30	2.70	1.80	2.30
KNR6020-6R8NT	6.8±30%	0.103	0.079	31	2.20	2.60	1.80	2.30
KNR6020-8R2NT	8.2±30%	0.137	0.105	27	2.10	2.50	1.40	1.80
KNR6020-100MT	10±20%	0.137	0.105	27	1.75	2.10	1.40	1.80
KNR6020-120MT	12±20%	0.156	0.120	25	1.45	1.70	1.30	1.60
KNR6020-150MT	15±20%	0.189	0.145	21	1.20	1.40	1.20	1.50
KNR6020-180MT	18±20%	0.234	0.180	18	1.20	1.40	1.08	1.40
KNR6020-220MT	22±20%	0.265	0.204	16	1.05	1.20	1.00	1.30
KNR6020-330MT	33±20%	0.390	0.30	11	0.95	1.10	0.84	1.05
KNR6020-470MT	47±20%	0.559	0.430	10	0.70	0.90	0.80	0.90
KNR6020-680MT	68±20%	0.820	0.630	8.7	0.50	0.60	0.75	0.86
KNR6020-101MT	100±20%	1.200	1.000	7	0.64	0.84	0.50	0.58
KNR6020-151MT	150±20%	2.080	1.600	6	0.50	0.60	0.45	0.52
KNR6020-221MT	220±20%	3.461	2.662	4.7	0.45	0.55	0.33	0.38
KNR6020-331MT	330±20%	3.419	2.630	3	0.27	0.33	0.33	0.39

KNR6028 Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@100kHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	µH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
KNR6028-R82NT	0.82±30%	0.016	0.012	97	6.50	9.00	5.20	6.00
KNR6028-1R0NT	1.0±30%	0.013	0.010	70	5.75	7.00	5.20	5.70
KNR6028-1R2NT	1.2±30%	0.017	0.013	69	6.40	7.50	4.58	5.00
KNR6028-1R5NT	1.5±30%	0.017	0.013	65	6.00	6.60	4.58	5.00
KNR6028-2R2NT	2.2±30%	0.026	0.020	48	5.10	5.60	3.75	4.10
KNR6028-2R7NT	2.7±30%	0.026	0.020	48	3.80	4.10	3.75	4.10
KNR6028-3R3NT	3.3±30%	0.033	0.025	41	4.15	4.50	3.48	3.80
KNR6028-3R6NT	3.6±30%	0.035	0.027	40	3.20	4.20	5.40	6.00
KNR6028-3R9NT	3.9±30%	0.042	0.032	31	3.50	4.50	4.20	4.80
KNR6028-4R3NT	4.3±30%	0.042	0.032	28	3.30	3.80	4.20	4.80
KNR6028-4R7NT	4.7±30%	0.039	0.030	35	3.00	3.30	3.08	3.40
KNR6028-5R1NT	5.1±30%	0.056	0.043	32	3.20	3.50	2.60	2.80
KNR6028-5R6NT	5.6±30%	0.056	0.043	30	3.00	3.50	2.60	3.00
KNR6028-6R2MT	6.2±20%	0.061	0.047	30	3.05	3.30	2.40	2.60
KNR6028-6R8MT	6.8±20%	0.061	0.047	27	2.60	3.00	2.40	2.60
KNR6028-8R2MT	8.2±20%	0.072	0.055	24	2.30	2.50	2.25	2.50
KNR6028-9R1MT	9.1±20%	0.096	0.074	24	2.55	2.80	2.15	2.40
KNR6028-100MT	10±20%	0.094	0.072	23	2.04	2.50	1.95	2.40
KNR6028-120MT	12±20%	0.104	0.080	18	1.80	2.00	1.85	2.00
KNR6028-150MT	15±20%	0.163	0.125	18	1.75	1.90	1.45	1.60
KNR6028-180MT	18±20%	0.156	0.120	15	1.52	1.80	1.45	1.60
KNR6028-220MT	22±20%	0.182	0.140	14	1.45	1.80	1.40	1.60
KNR6028-270MT	27±20%	0.202	0.155	13	1.50	1.60	1.32	1.40
KNR6028-330MT	33±20%	0.241	0.185	12	1.35	1.50	1.22	1.30
KNR6028-360MT	36±20%	0.280	0.215	11	1.25	1.40	1.13	1.20
KNR6028-390MT	39±20%	0.293	0.225	11	1.25	1.40	1.10	1.20
KNR6028-470MT	47±20%	0.410	0.315	9.5	1.15	1.30	1.06	1.10
KNR6028-510MT	51±20%	0.442	0.340	10	0.80	0.92	1.00	1.20
KNR6028-560MT	56±20%	0.449	0.345	8.2	1.05	1.20	0.89	1.00
KNR6028-680MT	68±20%	0.468	0.360	7.7	0.80	0.95	0.86	0.95
KNR6028-750MT	75±20%	0.533	0.410	7.7	0.90	0.99	0.81	0.90
KNR6028-820MT	82±20%	0.650	0.50	7.7	0.80	0.88	0.70	0.77
KNR6028-101MT	100±20%	0.650	0.50	7.1	0.65	0.71	0.70	0.77
KNR6028-151MT	150±20%	0.780	0.600	1.8	0.50	0.58	0.70	0.80
KNR6028-221MT	220±20%	1.729	1.330	3.4	0.40	0.50	0.50	0.57
KNR6028-331MT	330±20%	3.640	2.800	2.6	0.30	0.40	0.35	0.40
KNR6028-401MT	400±20%	2.808	2.160	2.8	0.30	0.33	0.40	0.45

KNR6028-681MT	680±20%	6.630	5.100	1.8	0.23	0.30	0.24	0.28
KNR6028-102MT	1000±20%	7.540	5.80	1.5	0.18	0.22	0.23	0.26

KNR6040 Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@100kHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	µH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
KNR6040-1R0MT	1.0±20%	0.010	0.008	97	7.85	9.05	6.30	7.20
KNR6040-1R5MT	1.5±20%	0.016	0.012	47	7.40	8.51	4.50	5.18
KNR6040-2R2MT	2.2±20%	0.019	0.015	35	7.50	8.63	4.80	5.50
KNR6040-4R7MT	4.7±20%	0.027	0.023	25	4.50	5.00	4.00	4.70
KNR6040-6R8MT	6.8±20%	0.052	0.040	21	4.25	4.90	2.97	3.43
KNR6040-8R2MT	8.2±20%	0.059	0.045	18	3.30	4.00	2.80	3.20
KNR6040-100MT	10±20%	0.062	0.048	16	3.20	3.50	2.45	2.80
KNR6040-120MT	12±20%	0.075	0.058	14	2.80	3.25	2.20	2.55
KNR6040-150MT	15±20%	0.088	0.068	13	2.50	3.00	2.05	2.35
KNR6040-180MT	18±20%	0.108	0.083	11	2.30	2.75	1.85	2.10
KNR6040-220MT	22±20%	0.116	0.089	10	2.05	2.50	1.80	2.05
KNR6040-330MT	33±20%	0.178	0.137	9.9	1.65	2.00	1.45	1.65
KNR6040-470MT	47±20%	0.287	0.221	6.7	1.40	1.61	1.18	1.36
KNR6040-680MT	68±20%	0.370	0.285	5.6	1.15	1.40	0.95	1.10
KNR6040-101MT	100±20%	0.502	0.418	3.8	0.92	1.08	0.96	1.10
KNR6040-121MT	120±20%	0.663	0.510	5.2	0.91	1.10	0.80	0.90
KNR6040-181MT	180±20%	1.001	0.770	3.8	0.69	0.83	0.64	0.72
KNR6040-221MT	220±20%	1.430	1.100	2.9	0.70	0.80	0.55	0.64
KNR6040-331MT	330±20%	1.490	1.240	2.4	0.52	0.58	0.52	0.58
KNR6040-471MT	470±20%	2.500	1.790	2.0	0.42	0.50	0.47	0.55

KNR6045 Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@100kHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	µH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
KNR6045-R47NT	0.47±30%	0.008	0.006	155	15.00	16.50	6.50	6.60
KNR6045-R56NT	0.56±30%	0.008	0.006	142	14.00	15.00	6.50	7.50
KNR6045-R68NT	0.68±30%	0.008	0.006	99	11.00	12.00	5.70	6.50
KNR6045-R82NT	0.82±30%	0.010	0.008	140	10.35	11.00	5.90	6.50
KNR6045-1R0NT	1.0±30%	0.014	0.011	100	9.85	10.00	5.14	5.60
KNR6045-1R2NT	1.2±30%	0.013	0.010	100	8.35	9.10	5.40	5.90

Wire Wound SMD Power Inductor-KNR Series



KNR6045-1R3NT	1.3±30%	0.013	0.010	100	8.35	9.10	5.40	5.90
KNR6045-1R5NT	1.5±30%	0.016	0.012	65	8.80	9.70	4.95	5.40
KNR6045-1R8NT	1.8±30%	0.016	0.012	74	7.60	8.40	4.95	5.40
KNR6045-2R2NT	2.2±30%	0.018	0.014	52	6.75	7.40	4.60	5.00
KNR6045-2R3NT	2.3±30%	0.027	0.021	60	6.00	6.60	3.50	3.80
KNR6045-2R7NT	2.7±30%	0.020	0.015	38	5.75	6.30	4.30	4.70
KNR6045-3R0NT	3.0±30%	0.026	0.020	35	5.60	6.20	3.80	4.20
KNR6045-3R3NT	3.3±30%	0.027	0.021	32	5.90	6.20	3.70	4.00
KNR6045-3R6NT	3.6±30%	0.027	0.021	28	5.25	5.70	3.70	4.00
KNR6045-4R3MT	4.3±20%	0.030	0.023	23	4.45	4.90	3.50	3.80
KNR6045-4R5MT	4.5±20%	0.034	0.026	24	4.97	5.50	3.30	3.60
KNR6045-4R7MT	4.7±20%	0.034	0.026	24	4.97	5.50	3.30	3.60
KNR6045-5R1MT	5.1±20%	0.034	0.026	23	4.40	4.80	3.30	3.60
KNR6045-5R6MT	5.6±20%	0.038	0.029	23	4.15	4.60	3.15	3.40
KNR6045-6R2MT	6.2±20%	0.040	0.031	26	4.43	4.80	3.00	3.30
KNR6045-6R3MT	6.3±20%	0.040	0.031	26	4.43	4.70	3.00	3.30
KNR6045-6R8MT	6.8±20%	0.040	0.031	20	3.90	4.30	3.00	3.30
KNR6045-7R5MT	7.5±20%	0.044	0.034	18	3.50	3.80	2.90	3.20
KNR6045-8R2MT	8.2±20%	0.056	0.043	21	3.90	4.30	2.60	2.80
KNR6045-9R1MT	9.1±20%	0.056	0.043	17	3.35	3.70	2.60	2.80
KNR6045-100MT	10±20%	0.062	0.048	15	3.20	3.50	2.45	2.70
KNR6045-120MT	12±20%	0.075	0.058	13	2.80	3.00	2.20	2.40
KNR6045-150MT	15±20%	0.088	0.068	12	2.50	2.70	2.05	2.20
KNR6045-180MT	18±20%	0.105	0.081	10	2.20	2.40	1.85	2.00
KNR6045-220MT	22±20%	0.116	0.089	10	2.05	2.20	1.80	2.00
KNR6045-270MT	27±20%	0.133	0.102	9.2	1.90	2.10	1.65	1.80
KNR6045-300MT	30±20%	0.172	0.132	7.8	1.70	1.80	1.50	1.60
KNR6045-330MT	33±20%	0.178	0.137	7.8	1.65	1.80	1.45	1.60
KNR6045-360MT	36±20%	0.225	0.173	7.8	1.62	1.80	1.40	1.50
KNR6045-390MT	39±20%	0.234	0.180	7.8	1.50	1.60	1.25	1.40
KNR6045-430MT	43±20%	0.260	0.20	7.7	1.63	1.80	1.20	1.30
KNR6045-470MT	47±20%	0.260	0.20	6.4	1.40	1.50	1.20	1.30
KNR6045-510MT	51±20%	0.269	0.207	6.4	1.35	1.50	1.15	1.20
KNR6045-560MT	56±20%	0.287	0.221	6.4	1.30	1.40	1.10	1.20
KNR6045-620MT	62±20%	0.306	0.235	6.4	1.25	1.40	1.10	1.20
KNR6045-680MT	68±20%	0.376	0.289	6.4	1.20	1.30	1.00	1.10
KNR6045-750MT	75±20%	0.397	0.305	5	1.15	1.20	0.95	1.00
KNR6045-820MT	82±20%	0.443	0.341	4.9	1.05	1.10	0.90	0.99
KNR6045-910MT	91±20%	0.467	0.359	4.9	1.00	1.10	0.85	0.94
KNR6045-101MT	100±20%	0.563	0.433	4.2	0.95	1.00	0.80	0.88
KNR6045-121MT	120±20%	0.629	0.484	4.2	0.85	0.94	0.77	0.85
KNR6045-151MT	150±20%	0.754	0.580	4.2	0.80	0.88	0.70	0.77
KNR6045-221MT	220±20%	1.084	0.834	3.5	0.70	0.77	0.59	0.65

KNR6045-271MT	270±20%	1.425	1.096	2.8	0.65	0.75	0.55	0.63
KNR6045-331MT	330±20%	1.651	1.270	2.8	0.57	0.63	0.57	0.63
KNR6045-391MT	390±20%	2.340	1.800	2.1	0.50	0.58	0.40	0.46
KNR6045-471MT	470±20%	2.340	1.80	2.0	0.500	0.560	0.420	0.480
KNR6045-561MT	560±20%	3.224	2.480	1.9	0.46	0.53	0.33	0.38
KNR6045-681MT	680±20%	3.250	2.50	1.7	0.420	0.460	0.330	0.380
KNR6045-751MT	750±20%	4.810	3.700	1.5	0.400	0.460	0.300	0.340
KNR6045-821MT	820±20%	4.810	3.700	1.1	0.360	0.420	0.300	0.340
KNR6045-102MT	1000±20%	5.85	4.50	1.30	0.300	0.350	0.300	0.350
KNR6045-152MT	1500±20%	8.10	6.75	1.05	0.240	0.290	0.210	0.240
KNR6045-202KT	2000±10%	11.64	9.70	0.90	0.210	0.250	0.175	0.202
KNR6045-222KT	2200±10%	12.00	10.00	0.90	0.205	0.240	0.169	0.195
KNR6045-252KT	2500±10%	12.68	10.57	0.80	0.200	0.230	0.167	0.193
KNR6045-332KT	3300±10%	15.30	13.00	0.70	0.170	0.200	0.150	0.170
KNR6045-472KT	4700±10%	22.50	18.75	0.60	0.150	0.170	0.120	0.140
KNR6045-502KT	5000±10%	24.00	20.00	0.60	0.135	0.165	0.115	0.130
KNR6045-602KT	6000±10%	36.00	30.00	0.55	0.125	0.150	0.097	0.113
KNR6045-682KT	6800±10%	37.40	31.20	0.50	0.120	0.140	0.095	0.110
KNR6045-702KT	7000±10%	39.60	33.00	0.50	0.120	0.145	0.090	0.105
KNR6045-802KT	8000±10%	42.60	35.50	0.45	0.115	0.135	0.085	0.100
KNR6045-103KT	10000±10%	48.00	40.00	0.40	0.100	0.120	0.080	0.090
KNR6045-123KT	12000±10%	68.40	57.00	0.35	0.095	0.110	0.065	0.075
KNR6045-143KT	14000±10%	76.20	63.50	0.30	0.090	0.100	0.063	0.073
KNR6045-153KT	15000±10%	77.40	64.50	0.30	0.080	0.090	0.060	0.070

KNR8050 Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@100kHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
KNR8050-1R5MT	1.5±20%	0.012	0.010	63	10.00	12.00	6.00	6.40
KNR8050-102MT	1000±20%	2.52	2.10	1.5	0.32	0.35	0.33	0.35
KNR8050-122KTY01	1200±10%	5.40	4.50	1.0	0.70	0.80	0.30	0.35
KNR8050-152KTY01	1500±10%	5.01	6.01	0.9	0.60	0.70	0.29	0.33
KNR8050-103MT*	10000±20%	22.80	19.0	0.35	0.09	0.10	0.11	0.13

*The test frequency of KNR8050-103MT is 1KHz.

KNR8060 Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@100kHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	µH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
KNR8060-681KTY01	680±10%	2.17	1.81	1.26	0.72	0.82	0.46	0.53
KNR8060-162KTY01	1600±10%	4.50	3.75	0.87	0.47	0.55	0.33	0.38
KNR8060-202KTY01	2000±10%	5.80	4.83	0.81	0.42	0.50	0.28	0.32
KNR8060-222KTY01	2200±10%	6.88	5.73	0.73	0.42	0.49	0.26	0.30
KNR8060-502KTY01	5000±10%	14.90	12.40	0.38	0.27	0.31	0.18	0.21

KNR8065 Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@100kHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	µH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
KNR8065-R68MT	0.68±20%	0.008	0.007	100	24.00	26.00	7.50	8.50
KNR8065-1R0MT	1.0±20%	0.011	0.008	96	20.0	22.0	7.00	8.00
KNR8065-2R2MT	2.2±20%	0.016	0.013	45	12.00	13.80	4.50	5.20
KNR8065-3R3MT	3.3±20%	0.018	0.015	27	9.50	10.00	5.10	5.90
KNR8065-4R7MT	4.7±20%	0.022	0.018	18	8.50	9.50	4.70	5.40
KNR8065-5R6MT	5.6±20%	0.026	0.022	17	8.00	9.00	4.50	5.20
KNR8065-6R8MT	6.8±20%	0.026	0.022	16	7.50	8.00	4.50	5.20
KNR8065-8R2MT	8.2±20%	0.031	0.026	15	7.00	7.70	4.20	4.80
KNR8065-100MT	10±20%	0.044	0.037	13	8.00	8.90	3.20	3.70
KNR8065-150MT	15±20%	0.053	0.044	10	5.70	6.70	3.30	3.80
KNR8065-220MT	22±20%	0.072	0.060	8	4.30	4.80	2.70	3.10
KNR8065-470MT	47±20%	0.152	0.127	7	3.40	3.70	1.85	2.15
KNR8065-560MT	56±20%	0.198	0.165	6	3.20	3.70	1.35	1.55
KNR8065-680MT	68±20%	0.218	0.182	5	2.70	3.20	1.55	1.80
KNR8065-101MT	100±20%	0.280	0.233	3.1	2.00	2.40	1.35	1.45
KNR8065-151MT	150±20%	0.440	0.353	2.5	1.60	2.00	0.95	1.10
KNR8065-221MT	220±20%	0.656	0.547	2.0	1.20	1.50	0.80	0.90
KNR8065-331MT	330±20%	0.840	0.700	1.7	1.00	1.20	0.75	0.85
KNR8065-431MT	430±20%	1.20	1.00	1.5	0.95	1.05	0.61	0.69
KNR8065-471MT	470±20%	1.560	1.300	1.4	1.00	1.20	0.55	0.65
KNR8065-681MT	680±20%	1.944	1.620	1.0	0.85	1.00	0.52	0.60
KNR8065-102MT	1000±20%	2.82	2.35	1.1	0.65	0.73	0.40	0.45
KNR8065-152MT	1500±20%	4.380	3.65	0.7	0.54	0.60	0.32	0.37
KNR8065-222MT	2200±20%	6.00	5.00	0.7	0.45	0.51	0.27	0.31

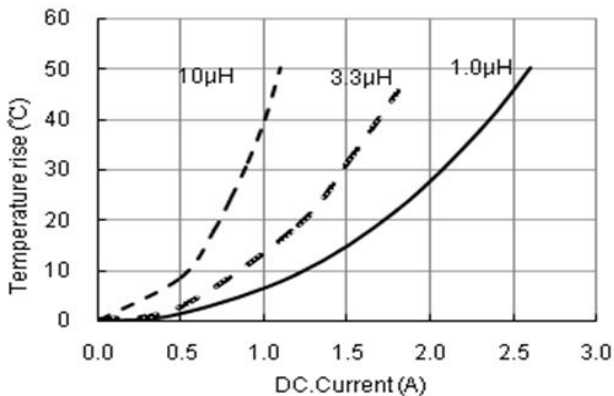
KNR8065-332MT	3300±20%	8.76	7.30	0.7	0.36	0.40	0.23	0.26
KNR8065-472MT	4700±20%	14.58	12.15	0.4	0.29	0.33	0.18	0.20
KNR8065-682MT	6800±20%	22.44	18.70	0.4	0.26	0.29	0.14	0.16
KNR8065-103MT	10000±20%	27.36	22.80	0.4	0.20	0.23	0.13	0.15

- 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

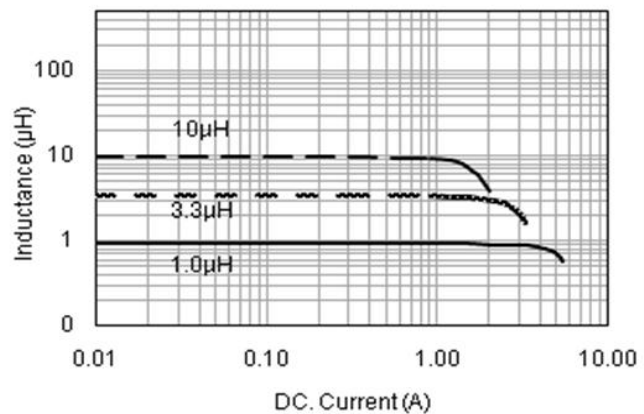
TYPICAL ELECTRICAL CHARACTERISTICS

KNR5012 Series

Temperature vs. DC Current Characteristics

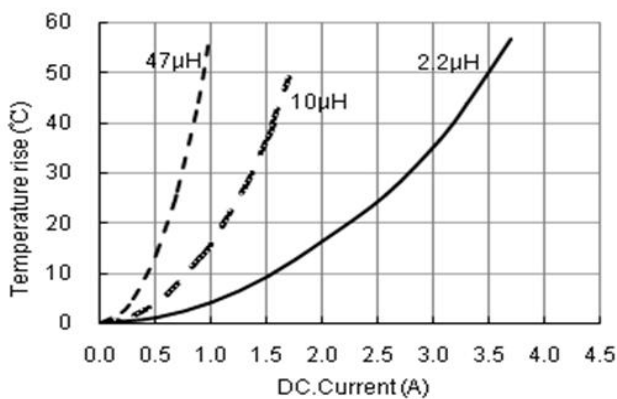


Inductance vs. DC Current Characteristics

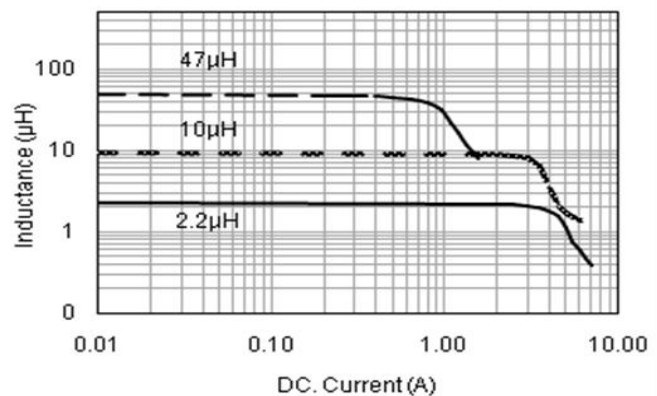


KNR5020 Series

Temperature vs. DC Current Characteristics



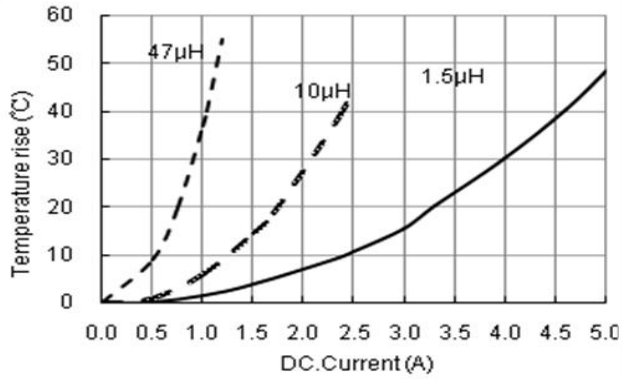
Inductance vs. DC Current Characteristics



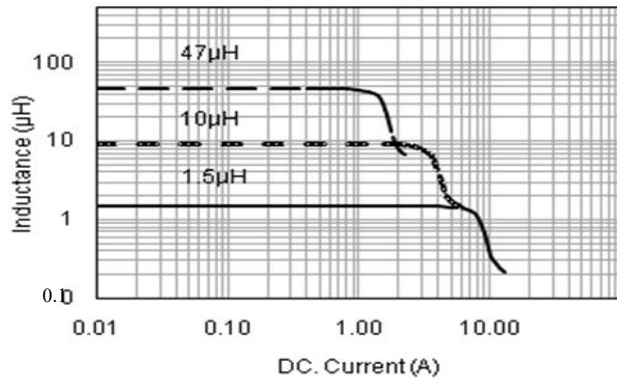
TYPICAL ELECTRICAL CHARACTERISTICS

KNR5040 Series

Temperature vs. DC Current Characteristics

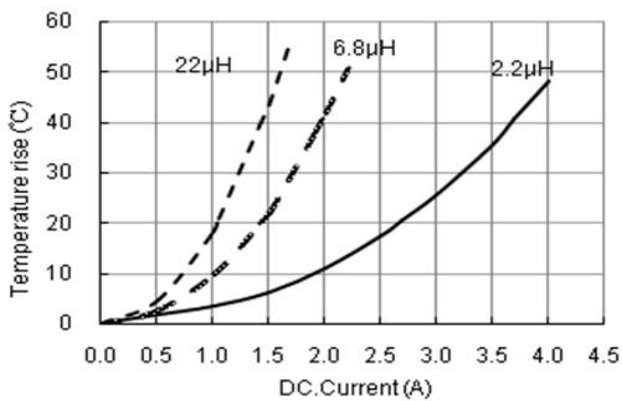


Inductance vs. DC Current Characteristics

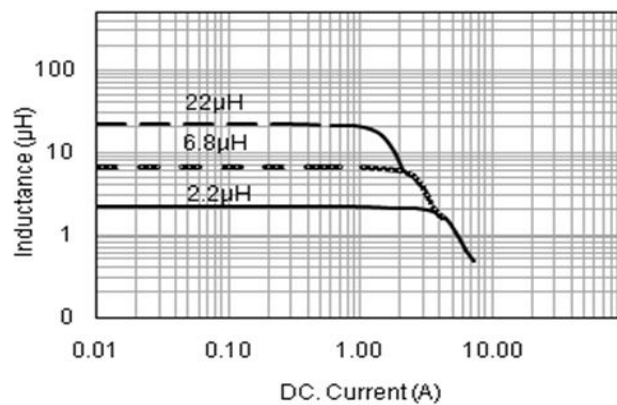


KNR6020 Series

Temperature vs. DC Current Characteristics

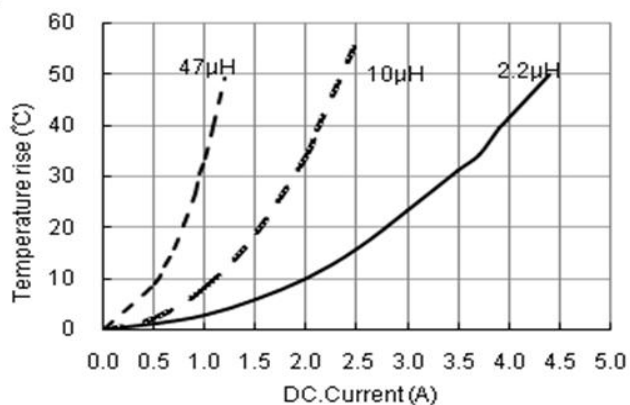


Inductance vs. DC Current Characteristics

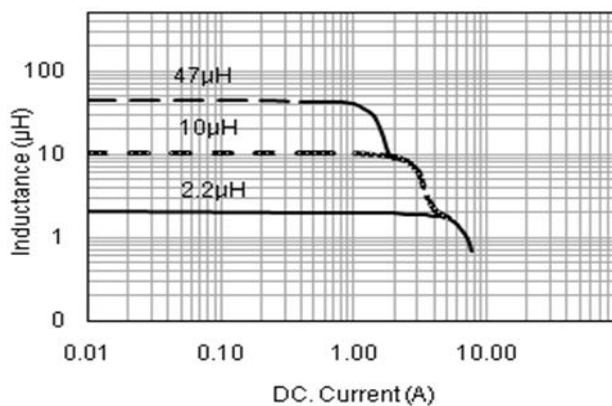


KNR6028 Series

Temperature vs. DC Current Characteristics

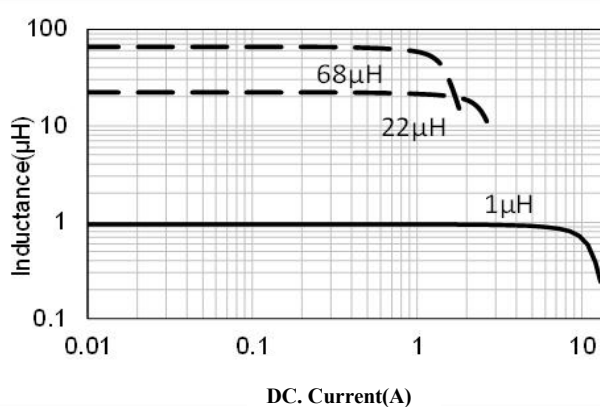
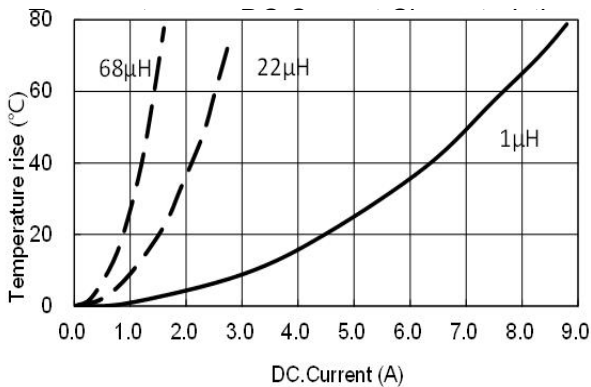


Inductance vs. DC Current Characteristics



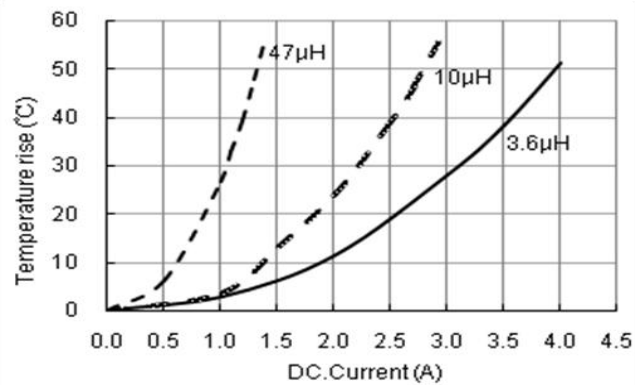
TYPICAL ELECTRICAL CHARACTERISTICS

KNR6040 Series

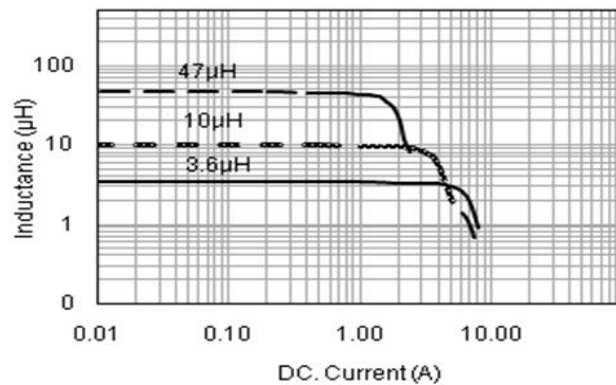


KNR6045 Series

Temperature vs. DC Current Characteristics

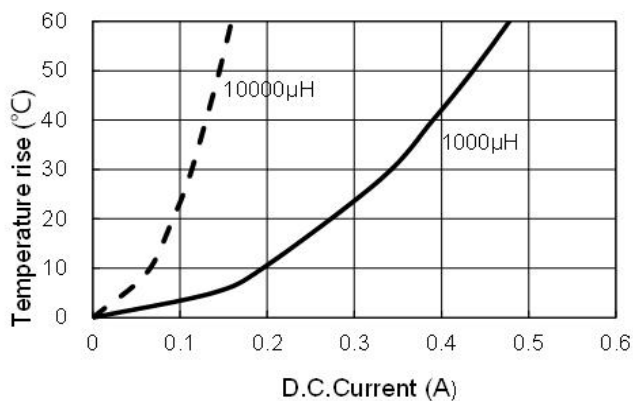


Inductance vs. DC Current Characteristics

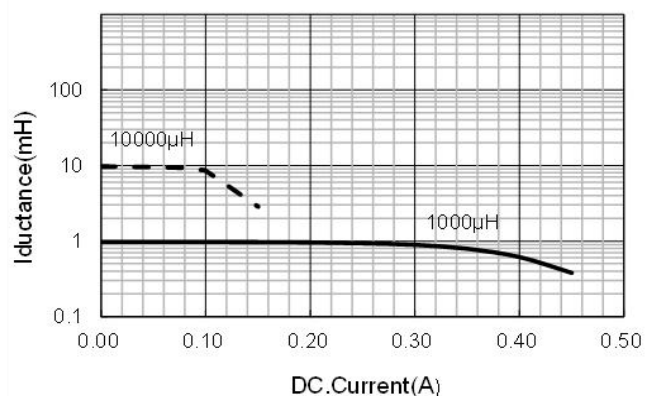


KNR8050 Series

Temperature vs. DC Current Characteristics



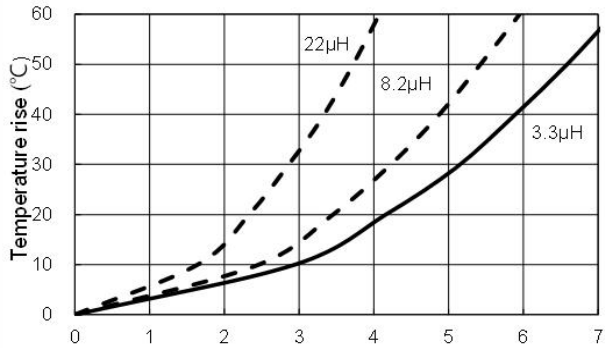
Inductance vs. DC Current Characteristics



TYPICAL ELECTRICAL CHARACTERISTICS

KNR8065 Series

Temperature vs. DC Current Characteristics



Inductance vs. DC Current Characteristics

