

Description

- 125C maximum total temperature operation
- Dual winding inductors that can be used as either a single inductor, or in coupled inductor/transformer applications (1:1 turns ratio)
- Four sizes of shielded drum core inductors
- Windings can be connected in series or parallel, offering a broad range of inductance and current ratings
- Peak current ratings from 0.13 Amps to 56 Amps
- RMS current ratings from 0.128 Amps to 17.9 Amps
- Inductance ratings from 0.33 μ H to 4.02mH
- Surface Mount
- 200 VAC Isolation between windings
- RoHS compliant (-R option)

Applications

- As a transformer: SEPIC, flyback
- As an inductor: Buck, boost, coupled inductor
- DC/DC converters
- VRM inductor for CPU and DDR power supplies
- Input and output filter chokes

Environmental Data

- Storage temperature: -40°C to +125°C
- Operating temperature: -40°C to +125°C (Range is application specific).
- IR reflow temperature: 240°C for 30 seconds max.



Packaging

- Supplied in tape and reel packaging, 1350 (DRQ73), 1100 (DRQ74), 600 (DRQ125), and 350 (DRQ127) per reel

Part Number	Rated Inductance (μ H)	Parallel Ratings					Series Ratings				
		OCL (1) +/-20% (μ H)	I rms (2) Amperes	I sat (3) Amperes Peak	DCR Ω (4) typ.	Volt (5) μ -Sec	OCL (1) +/-20% (μ H)	I rms (2) Amperes	I sat (3) Amperes Peak	DCR Ω (4) typ.	Volt (5) μ -Sec
DRQ73-R33	0.33	0.306	6.19	14.4	0.0074	1.98	1.224	3.10	7.18	0.0296	3.96
DRQ73-1R0	1.00	0.992	5.25	7.97	0.0103	3.56	3.968	2.63	3.99	0.0411	7.12
DRQ73-1R5	1.50	1.482	4.64	6.52	0.0132	4.36	5.928	2.32	3.26	0.0527	8.72
DRQ73-2R2	2.20	2.070	4.11	5.52	0.0167	5.15	8.280	2.06	2.76	0.0669	10.3
DRQ73-3R3	3.30	3.540	3.31	4.22	0.0259	6.73	14.16	1.66	2.11	0.1035	13.5
DRQ73-4R7	4.70	4.422	3.09	3.78	0.0297	7.52	17.69	1.55	1.89	0.1188	15.0
DRQ73-6R8	6.80	6.480	2.55	3.12	0.0435	9.11	25.92	1.28	1.56	0.1742	18.2
DRQ73-8R2	8.20	8.930	2.19	2.66	0.0592	10.7	35.72	1.10	1.33	0.2368	21.4
DRQ73-100	10.0	10.30	2.08	2.47	0.0656	11.5	41.20	1.04	1.24	0.2623	23.0
DRQ73-150	15.0	15.01	1.83	2.05	0.0844	13.9	60.04	0.916	1.03	0.339	27.8
DRQ73-220	22.0	22.65	1.62	1.67	0.107	17.0	90.60	0.811	0.83	0.429	34.0
DRQ73-330	33.0	34.41	1.31	1.35	0.166	21.0	137.6	0.653	0.68	0.665	42.0
DRQ73-470	47.0	48.62	1.08	1.14	0.241	24.9	194.5	0.542	0.57	0.965	49.8
DRQ73-680	68.0	68.91	0.89	0.96	0.358	29.7	275.6	0.444	0.48	1.43	59.4
DRQ73-820	82.0	80.37	0.86	0.89	0.384	32.1	321.5	0.430	0.44	1.54	64.2
DRQ73-101	100	101.4	0.73	0.79	0.527	36.0	405.6	0.367	0.39	2.11	72.0
DRQ73-151	150	150.9	0.58	0.65	0.851	44.0	603.6	0.289	0.32	3.41	88.0
DRQ73-221	220	223.3	0.52	0.53	1.05	53.5	893.2	0.260	0.27	4.20	107
DRQ73-331	330	325.5	0.42	0.44	1.59	64.5	1302	0.211	0.22	6.36	129
DRQ73-471	470	465.8	0.35	0.37	2.36	77.2	1863	0.173	0.18	9.44	154
DRQ73-681	680	676.5	0.29	0.31	3.47	93.1	2706	0.143	0.15	13.88	186
DRQ73-821	820	821.7	0.27	0.28	3.93	103	3287	0.134	0.14	15.72	206
DRQ73-102	1000	995.0	0.26	0.25	4.34	113	3980	0.128	0.13	17.36	226

1) Open Circuit Inductance Test Parameters: 100kHz, 0.25 Vrms, 0.0 Adc
Parallel: (1,2 - 4,2) Series: (1 - 4) tie (2 - 3)
2) RMS current for an approximate ΔT of 40°C without core loss. It is recommended that the temperature of the part not exceed 125°C.
3) Peak current for approximately 30% roll-off at 20°C

4) DCR limits @ 20°C
5) Applied Volt-Time product (V- μ S) across the inductor. This value represents the applied V- μ S at 100kHz necessary to generate a core loss equal to 10% of the total losses for a 40°C temperature rise.
6) Turns Ratio (1-2):(3-4) 1:1

Part Number	Rated Inductance (μH)	Parallel Ratings					Series Ratings				
		OCL (1) +/-20% (μH)	I rms (2) Amperes	I sat (3) Amperes Peak	DCR Ω (4) typ.	Volt (5) μ-Sec	OCL (1) +/-20% (μH)	I rms (2) Amperes	I sat (3) Amperes Peak	DCR Ω (4) typ.	Volt (5) μ-Sec
DRQ74-R33	0.33	0.294	6.20	18.4	0.0074	1.71	1.176	3.10	9.18	0.0295	3.42
DRQ74-1R0	1.00	0.952	5.33	10.2	0.0100	3.08	3.808	2.66	5.10	0.0400	6.16
DRQ74-1R5	1.50	1.422	4.96	8.35	0.0115	3.76	5.688	2.48	4.17	0.0461	7.52
DRQ74-2R2	2.20	1.986	4.66	7.06	0.0130	4.45	7.944	2.33	3.53	0.0521	8.9
DRQ74-3R3	3.30	3.396	3.94	5.40	0.0183	5.81	13.58	1.97	2.70	0.0732	11.6
DRQ74-4R7	4.70	5.182	3.34	4.37	0.0254	7.18	20.73	1.67	2.19	0.102	14.4
DRQ74-6R8	6.80	7.344	2.60	3.67	0.0418	8.55	29.38	1.30	1.84	0.167	17.1
DRQ74-8R2	8.20	8.566	2.53	3.40	0.0441	9.23	34.26	1.27	1.70	0.177	18.5
DRQ74-100	10.0	9.882	2.41	3.17	0.0489	9.92	39.53	1.20	1.58	0.196	19.8
DRQ74-150	15.0	16.09	2.11	2.48	0.0637	12.7	64.36	1.05	1.24	0.255	25.4
DRQ74-220	22.0	21.73	1.75	2.13	0.0925	14.7	86.92	0.874	1.07	0.371	29.4
DRQ74-330	33.0	33.01	1.41	1.73	0.143	18.1	132.0	0.702	0.87	0.574	36.2
DRQ74-470	47.0	49.64	1.15	1.41	0.216	22.2	198.6	0.573	0.71	0.865	44.4
DRQ74-680	68.0	69.67	1.03	1.19	0.265	26.3	278.7	0.517	0.60	1.06	52.6
DRQ74-820	82.0	80.95	0.91	1.11	0.345	28.4	323.8	0.453	0.55	1.38	56.8
DRQ74-101	100	101.6	0.86	0.99	0.383	31.8	406.4	0.430	0.49	1.53	63.6
DRQ74-151	150	150.0	0.69	0.81	0.591	38.6	600.0	0.346	0.41	2.37	77.2
DRQ74-221	220	227.0	0.56	0.66	0.907	47.5	908.0	0.279	0.33	3.63	95
DRQ74-331	330	335.6	0.45	0.54	1.41	57.8	1342	0.224	0.27	5.66	116
DRQ74-471	470	465.3	0.40	0.46	1.74	68.1	1861	0.202	0.23	6.97	136
DRQ74-681	680	671.2	0.33	0.38	2.58	81.7	2685	0.166	0.19	10.3	163
DRQ74-821	820	812.7	0.31	0.35	2.93	89.9	3251	0.156	0.17	11.7	180
DRQ74-102	1000	1009	0.27	0.31	3.89	100	4036	0.135	0.16	15.6	200
DRQ125-R47	0.47	0.456	17.6	33.0	0.0018	3.17	1.824	8.80	16.5	0.0078	6.34
DRQ125-1R0	1.00	0.894	15.0	23.6	0.0024	4.43	3.576	7.51	11.8	0.0096	8.86
DRQ125-1R5	1.50	1.478	13.8	18.3	0.0029	5.70	5.912	6.89	9.15	0.0114	11.40
DRQ125-2R2	2.20	2.208	10.9	15.0	0.0045	6.97	8.832	5.46	7.50	0.0182	13.9
DRQ125-3R3	3.30	3.084	9.26	12.7	0.0063	8.23	12.34	4.63	6.35	0.0253	16.5
DRQ125-4R7	4.70	5.274	7.18	9.71	0.0105	10.8	21.10	3.59	4.86	0.0420	21.6
DRQ125-6R8	6.80	6.588	6.64	8.68	0.0123	12.0	26.35	3.32	4.34	0.0492	24.0
DRQ125-8R2	8.20	8.048	5.54	7.86	0.0176	13.3	32.19	2.77	3.93	0.0705	26.6
DRQ125-100	10.0	9.654	5.35	7.17	0.0189	14.6	38.62	2.67	3.59	0.0757	29.2
DRQ125-150	15.0	15.35	4.27	5.69	0.0298	18.4	61.40	2.13	2.85	0.120	36.8
DRQ125-220	22.0	22.36	3.70	4.71	0.0396	22.2	89.44	1.84	2.36	0.159	44.4
DRQ125-330	33.0	33.74	3.28	3.84	0.0505	27.2	135.0	1.64	1.92	0.203	54.4
DRQ125-470	47.0	47.47	2.71	3.24	0.0740	32.3	189.9	1.35	1.62	0.297	64.6
DRQ125-680	68.0	67.91	2.22	2.70	0.101	38.6	271.6	1.11	1.35	0.440	77.2
DRQ125-820	82.0	86.89	2.05	2.39	0.128	43.7	347.6	1.03	1.20	0.515	87.4
DRQ125-101	100	102.7	1.78	2.20	0.170	47.5	410.8	0.892	1.10	0.682	95.0
DRQ125-151	150	151.1	1.48	1.81	0.248	57.6	604.4	0.739	0.905	0.991	115.2
DRQ125-221	220	216.8	1.19	1.51	0.384	69.0	867.2	0.594	0.755	1.54	138
DRQ125-331	330	332.6	1.06	1.22	0.482	85.5	1330	0.530	0.610	1.93	171
DRQ125-471	470	473.1	0.87	1.02	0.718	102	1892	0.434	0.510	2.87	204
DRQ125-681	680	679.8	0.70	0.85	1.10	122	2719	0.350	0.425	4.42	244
DRQ125-821	820	828.0	0.60	0.77	1.49	135	3312	0.301	0.385	5.96	270
DRQ125-102	1000	1008	0.57	0.70	1.69	149	4032	0.283	0.350	6.76	298

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DRQ127-R47	0.47	0.419	17.9	56.0	0.00195	3.50	1.676	8.94	28	0.0078	7.00
DRQ127-1R0	1.00	0.821	15.5	40.0	0.00261	4.90	3.284	7.74	20	0.0104	9.80
DRQ127-1R5	1.50	1.357	13.5	31.1	0.00341	6.30	5.428	6.77	15.6	0.0137	12.60
DRQ127-2R2	2.20	2.027	12.5	25.5	0.00373	7.70	8.108	6.23	12.7	0.0161	15.4
DRQ127-3R3	3.30	2.831	10.4	21.5	0.00567	9.10	11.32	5.23	10.8	0.0229	18.2
DRQ127-4R7	4.70	4.841	8.25	16.5	0.00917	11.9	19.36	4.13	8.24	0.0367	23.8
DRQ127-6R8	6.80	7.387	7.34	13.3	0.0116	14.7	29.55	3.67	6.67	0.0465	29.4
DRQ127-8R2	8.20	8.861	6.32	12.2	0.0157	16.1	35.44	3.16	6.09	0.0627	32.2
DRQ127-100	10.0	10.47	6.04	11.2	0.0172	17.5	41.88	3.02	5.60	0.0686	35.0
DRQ127-150	15.0	14.09	5.03	9.66	0.0247	20.3	56.36	2.51	4.83	0.0990	40.6
DRQ127-220	22.0	22.93	4.00	7.57	0.0391	25.9	91.72	2.00	3.78	0.157	51.8
DRQ127-330	33.0	33.92	3.23	6.22	0.0600	31.5	135.7	1.61	3.11	0.241	63.0
DRQ127-470	47.0	47.05	2.95	5.28	0.0719	37.1	188.2	1.47	2.64	0.288	74.2
DRQ127-680	68.0	66.48	2.44	4.44	0.105	44.1	265.9	1.22	2.22	0.421	88.2
DRQ127-820	82.0	79.75	2.09	4.06	0.143	48.3	319.0	1.04	2.03	0.573	96.6
DRQ127-101	100	99.31	1.96	3.64	0.163	53.9	397.2	0.980	1.82	0.653	107.8
DRQ127-151	150	144.9	1.59	3.01	0.247	65.1	579.6	0.796	1.51	0.989	130.2
DRQ127-221	220	221.5	1.29	2.43	0.376	80.5	886.0	0.645	1.22	1.50	161
DRQ127-331	330	323.6	1.04	2.01	0.574	97.3	1294	0.522	1.01	2.30	195
DRQ127-471	470	467.1	0.85	1.68	0.861	117	1868	0.427	0.838	3.44	234
DRQ127-681	680	676.7	0.76	1.39	1.08	141	2707	0.380	0.697	4.32	282
DRQ127-821	820	818.1	0.65	1.27	1.47	155	3272	0.325	0.633	5.88	310
DRQ127-102	1000	1005	0.61	1.14	1.66	172	4020	0.307	0.571	6.64	344

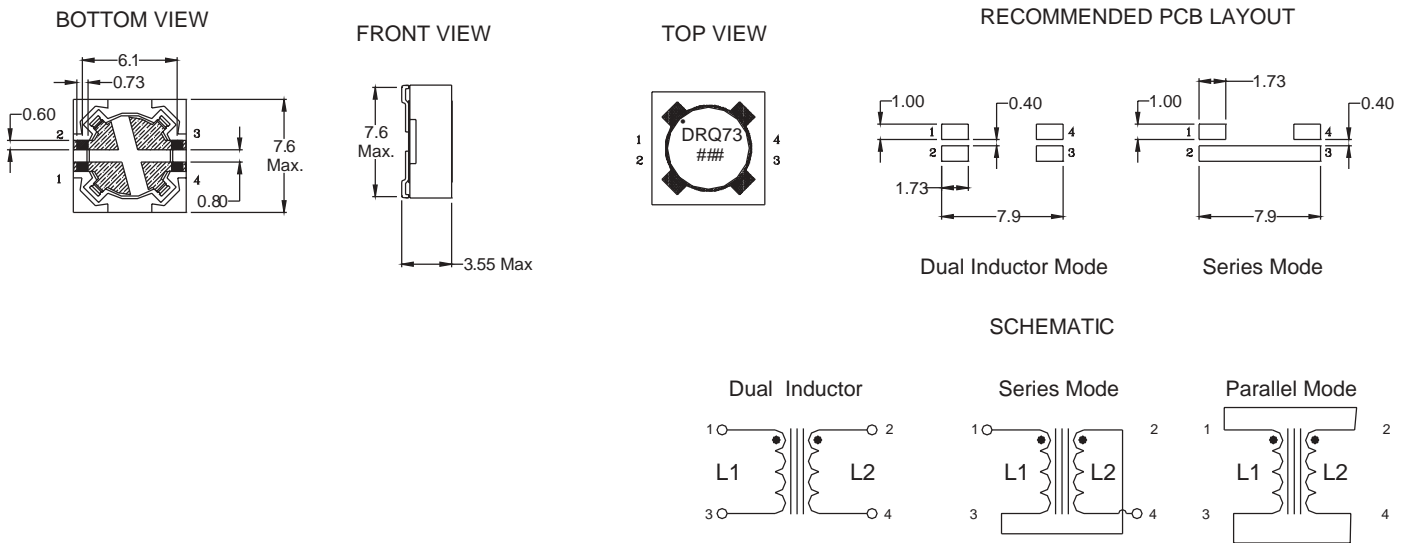
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Parallel: (1,2 - 4,2) Series: (1 - 4) tie (2 - 3)
- 2) RMS current for an approximate ΔT of 40°C without core loss. It is recommended that the temperature of the part not exceed 125°C.
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- 6) Turns Ratio (1-2):(3-4) 1:1

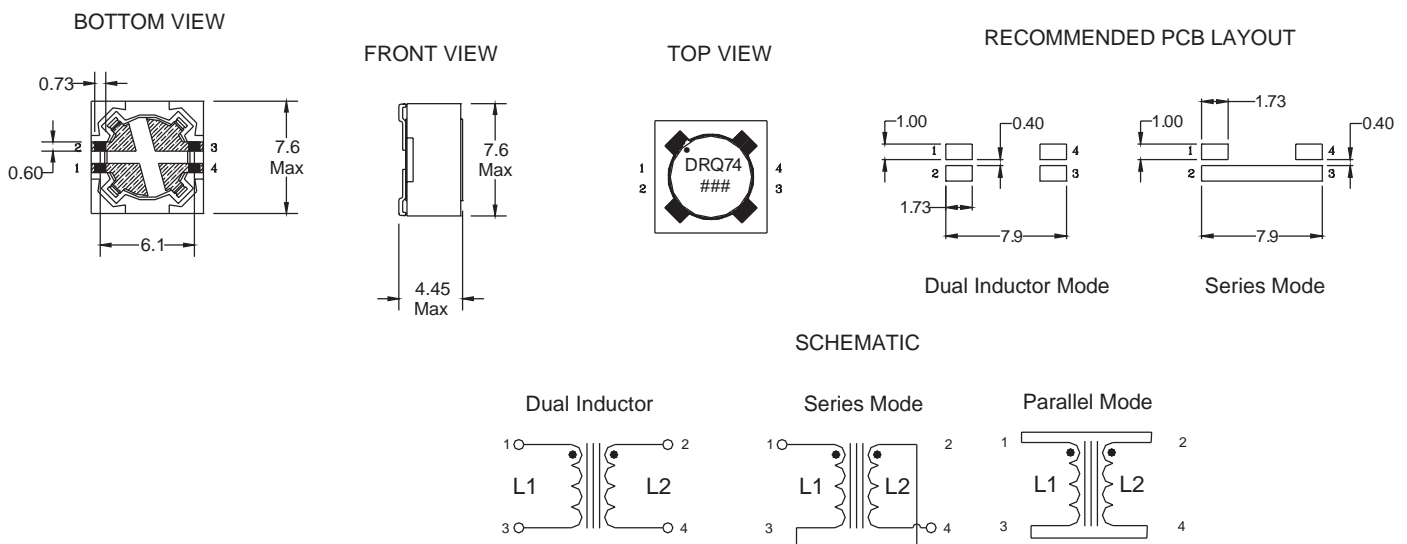
OPTION CODE	
Option Code	Description
-R	RoHS compliant version

Mechanical Diagrams

DRQ73 Series

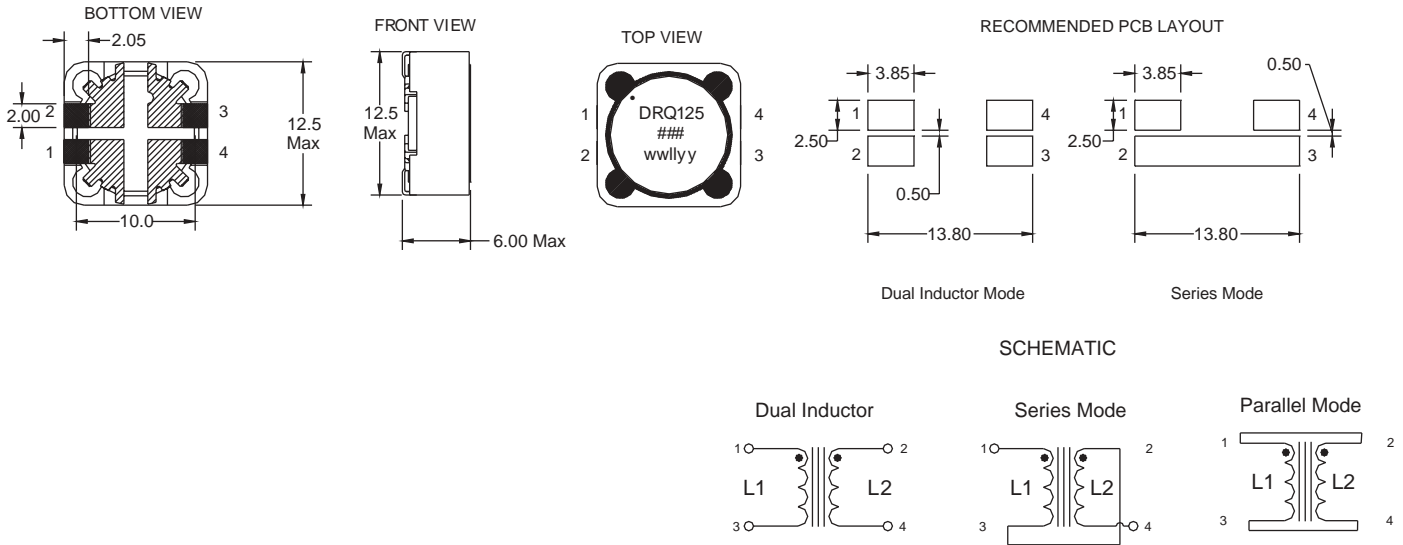


DRQ74 Series

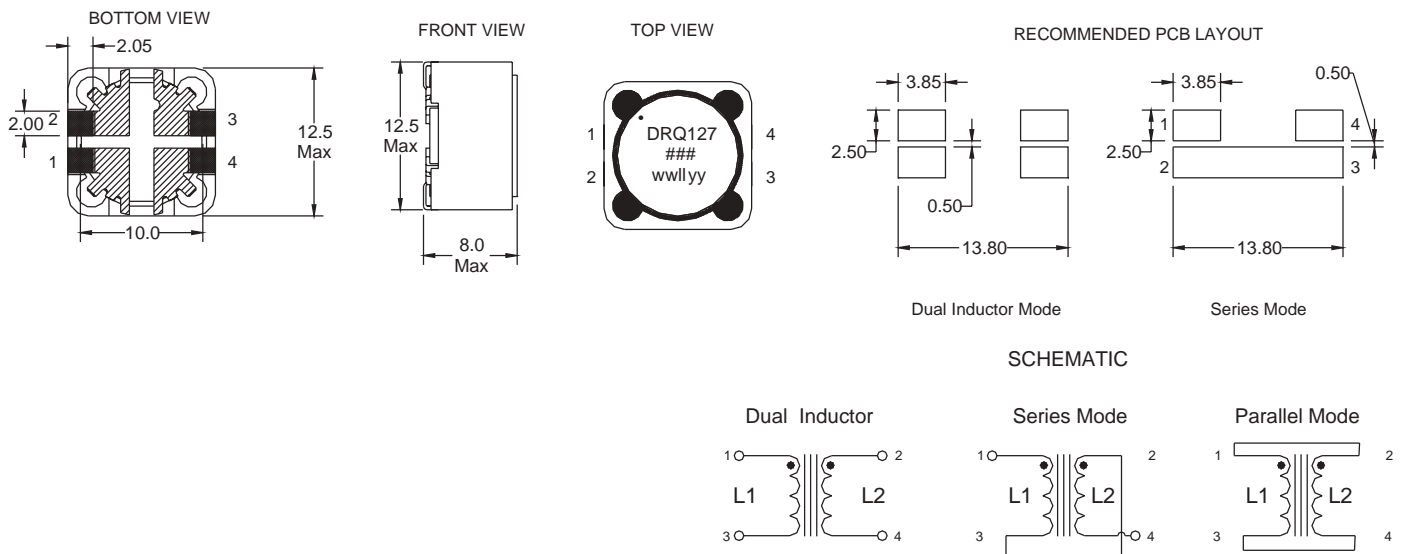


Mechanical Diagrams

DRQ125 Series

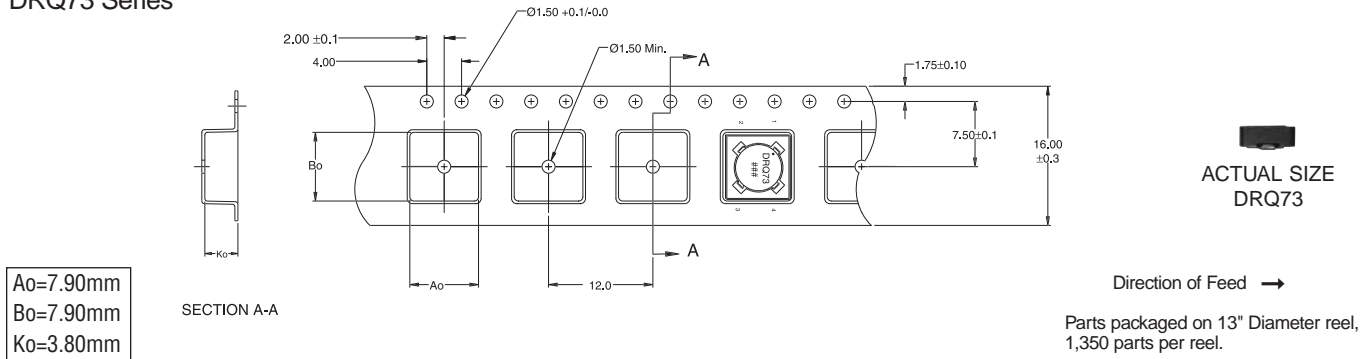


DRQ127 Series

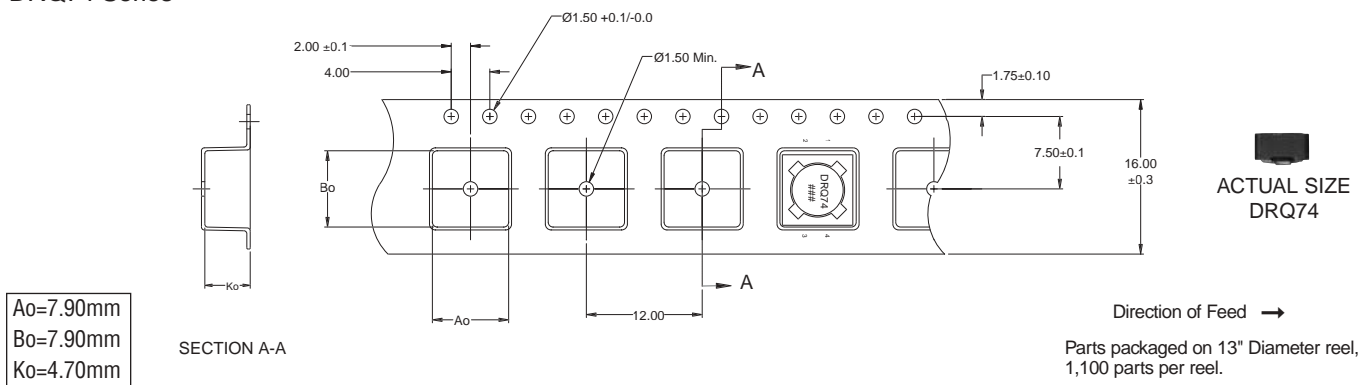


Packaging Information

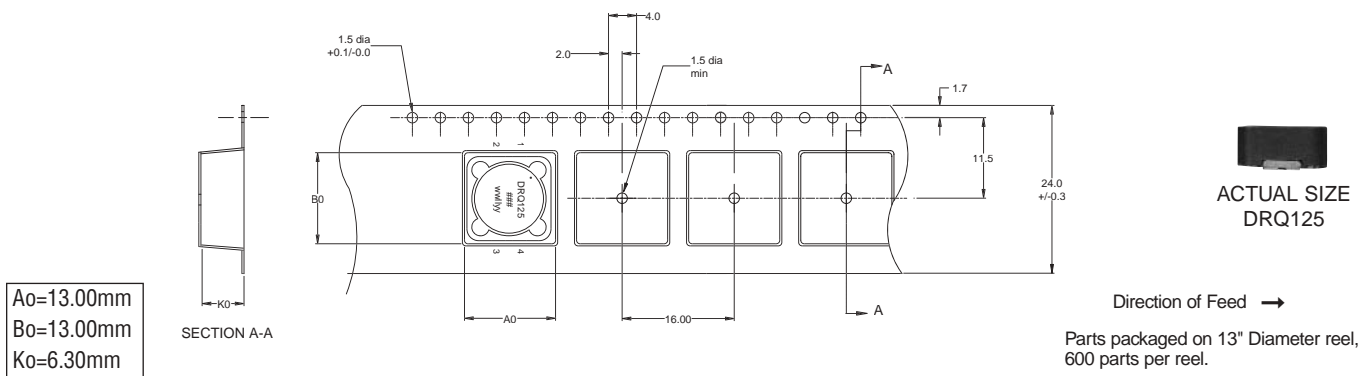
DRQ73 Series



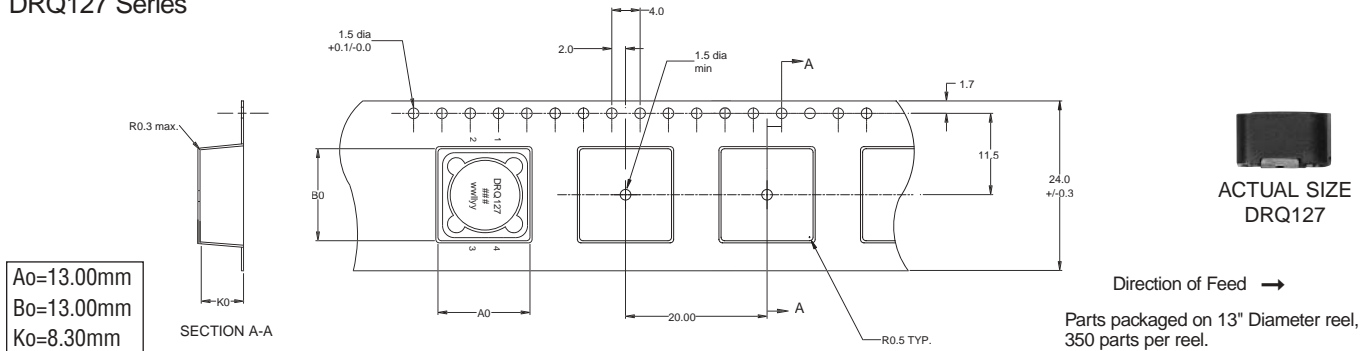
DRQ74 Series



DRQ125 Series

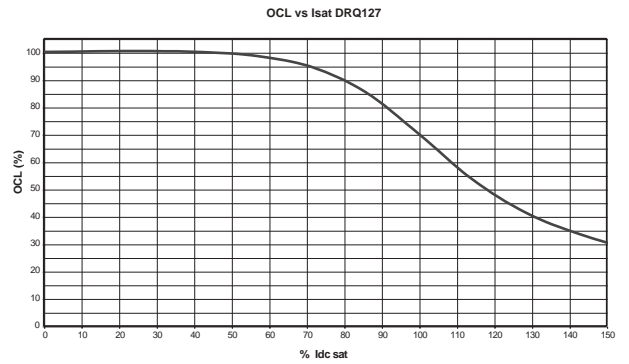
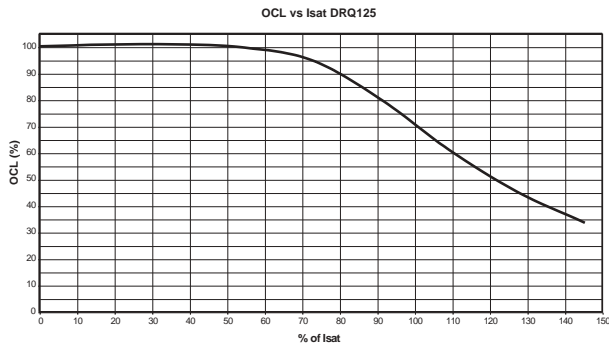
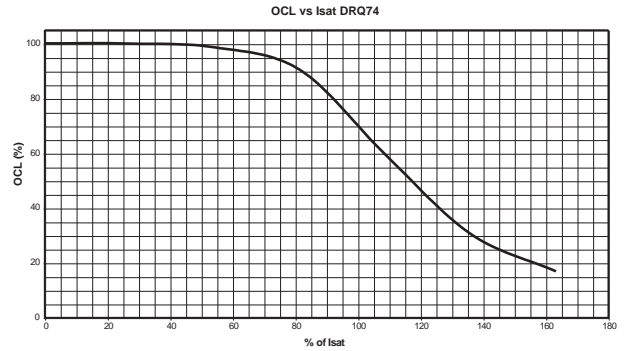
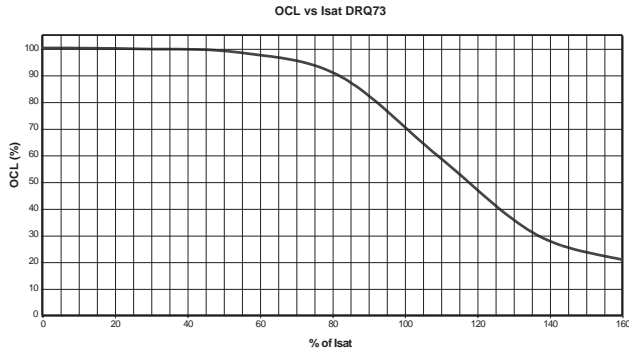


DRQ127 Series

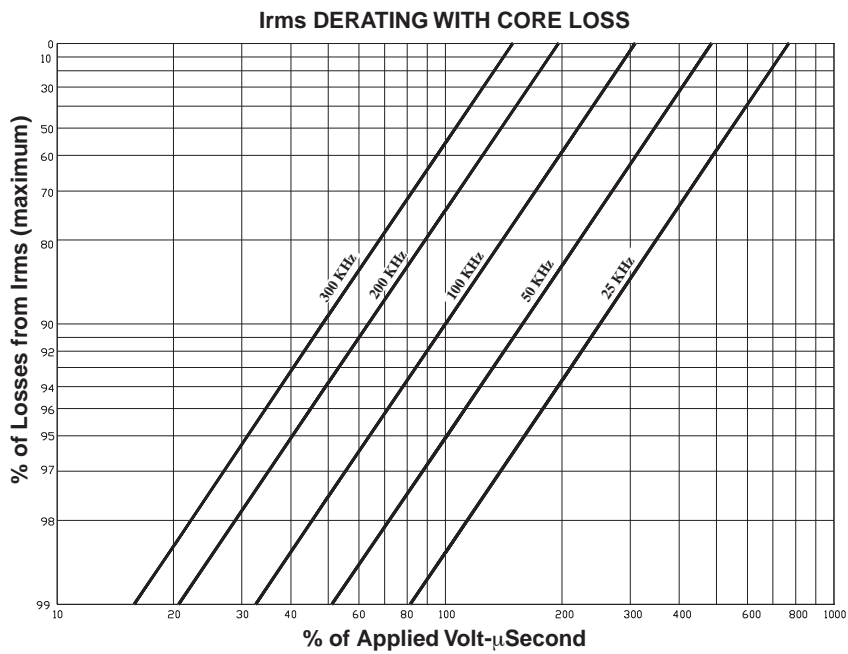


Dimensions are in millimeters.

Rolloff



Core Loss



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