东莞市群奥电子有限公司
DONGGUAN QUNIO ELECTRONIC CO.,LTD.

GR Series

+105℃,General(普通品)

◆ FEATURES

- For General.
- Life 2000 hours at +105℃
- Wide CV value range.

◆ SPECIFICATIONS

Items	Characteristics	
Category Temperature Range	-40~+105℃(6.3~100V)	-25~+105℃(160~450V)
Rated Voltage Range	6.3~450V.DC	
Nominal Capacitance Range	0.1~22000 μF	
Capacitance Tolerance	±20%(120Hz,+20℃)	
Leakage Current(MAX,+20℃)	I=0.01CV or 3(uA) after 2 minutes with rated working voltage	I=0.03CV+4(μA) after 2 minutes with rated working voltage

Dissipation Factor(MAX) Tan δ (+20℃,120Hz)

Rated Voltage(V)	6.3	10	16	25	35	50	63	100	~250	350~
Tan δ	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08	0.20	0.24

When nominal capacitance is over 1000 μF, tan δ shall be added 0.02 to the listed value with Increase of every 1000 μF

Load Life

After applying rated voltage with max ripple current for 2000 hrs at 105℃, the capacitors shall meet the following requirements

Capacitance Change	Within ±20% of the initial value
Dissipation Factor	Not more than 200% of the specified value
Leakage Current	Not more than the specified value

Shelf Life

After leaving capacitors under no load at 85℃ for 1000hrs, they meet the characteristic requirements listed at right

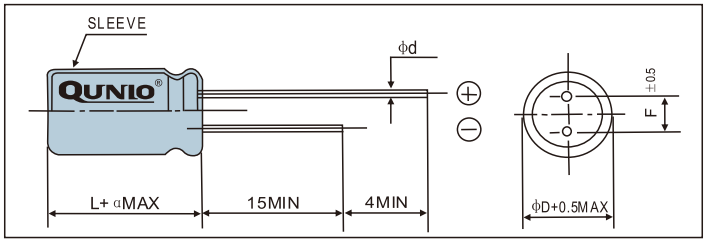
Capacitance Change	Within ±20% of the initial value
Tan δ	≤ 200% of initial specified value
Leakage Current	≤ 200% of initial specified value

Low Temperature Stability Impedance Rate(MAX)

Rated Voltage(V)	6.3	10	16	25	35	50	63	100	160~250	350~450
Z-25℃/Z+20℃	5	4	3	2	2	2	2	2	3	6
Z-40℃/Z+20℃	10	8	6	4	3	3	3	3	---	---

Others	JISC-5141 EIAJ RC-2372

◆ CASE SIZE TABLE



φD	5	6.3	8	10	13	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
φd	0.5			0.6		0.8	
α	L≤16: α=1.5			L≥20: α=2.0			

◆ RIPPLE CURRENT MULTIPLIER

Rated Voltage(v)	Cap (μF)	Frequency(Hz) 50	120	300	1K	10k~	Rated Voltage(v)	Cap (μF)	Frequency(Hz) 50	120	300	1K	10K~
6.3~100	≤47	0.75	1.0	1.35	1.57	2.0	160~450	1~220	0.80	1.00	1.25	1.40	1.60
	56~470	0.8	1.0	1.23	1.34	1.5		≥270	0.90	1.00	1.10	1.13	1.15
	≥560	0.85	1.0	1.10	1.13	1.15		---					

◆ STANDARD RATINGS **GR Series**

size: ΦD×L(mm)

Cap(μF) \ Voltage / Code		6.3V		10V		16V		25V		35V		50V		63V	
		0J		1A		1C		1E		1V		1H		1J	
0.1	0R1											5×11	2.1		
0.22	R22											5×11	3.2		
0.33	R33											5×11	6.3		
0.47	R47											5×11	10		
1	010											5×11	13		
2.2	2R2											5×11	18		
3.3	3R3											5×11	30		
4.7	4R7							5×11	37	5×11	37	5×11	37		
10	100					5×11	35	5×11	37	5×11	40	5×11	54	5×11	59
22	220			5×11	48	5×11	53	5×11	56	5×11	67	5×11	79	6.3×11	87
33	330	5×11	52	5×11	56	5×11	60	5×11	75	5×11	80	6.3×11	115	6.3×11	122
47	470	5×11	61	5×11	66	5×11	80	5×11	84	5×11	101	6.3×11	133	6.3×11	146
100	101	5×11	94	5×11	105	5×11	125	6.3×11	159	6.3×11	168	8×12	229	8×14	215
220	221	5×11	153	6.3×11	193	6.3×11	213	8×12	285	8×14	294	10×16	509	10×20	504
330	331	6.3×11	216	6.3×11	239	8×12	315	8×14	340	10×13	419	10×20	650	13×21	720
470	471	6.3×11	258	8×12	295	8×12	366	8×14	400	10×16	547	13×21	801	13×21	790
680	681	8×12	365	8×12	380	8×16	480	10×16	620	10×20	720	13×21	923	13×25	1160
1000	102	8×12	443	8×16	571	10×16	680	10×20	821	13×21	915	13×25	1287	16×25	1340
2200	222	10×16	800	10×20	886	13×21	1108	13×25	1297	16×25	1450	18×32	1884	18×35	1760
3300	332	10×20	1032	13×21	1205	13×25	1389	16×25	1646	16×35	1610	18×35	1860		
4700	472	13×21	1280	13×25	1492	16×25	1740	16×30	2012	18×35	1820	18×40	1956		
6800	682	13×25	1554	16×25	1824	16×30	2081	16×40	2452						
10000	103	16×25	1897	16×30	1980	18×32	2527								
22000	223	18×35	2420	18×40	2616										

Maximum Allowable Ripple Current(mA rms) at 105℃ 120Hz

◆ STANDARD RATINGS

Cap(μF) \ Voltage / Code		100V		160V		200V		250V		350V		400V		450V	
		2A		2C		2D		2E		2V		2G		2W	
1	010	5×11	16	5×11	16	5×11	14	6.3×11	17	6.3×11	19	6.3×11	19	6.3×11	19
2.2	2R2	5×11	21	5×11	21	6.3×11	20	6.3×11	27	6.3×11	30	8×12	30	8×12	30
3.3	3R3	5×11	34	6.3×11	34	6.3×11	30	6.3×11	35	8×12	40	8×12	40	10×13	40
4.7	4R7	5×11	40	6.3×11	41	6.3×11	40	8×12	45	10×13	43	10×13	43	10×13	60
6.8	6R8	5×11	42	8×12	46	8×12	52	10×13	57	10×13	61	10×16	68	10×16	68
10	100	6.3×11	61	8×12	61	8×12	64	10×13	75	10×16	73	10×20	78	10×20	78
22	220	8×12	110	10×13	110	10×16	121	10×20	130	13×21	163	13×21	163	13×25	188
33	330	8×12	144	10×20	156	10×20	165	13×21	184	16×25	193	16×25	193	16×25	237
47	470	10×13	199	13×21	205	13×21	220	13×25	238	16×25	290	18×20	290	18×25	305
68	680	10×16	260	13×21	292	13×21	335	13×25	362	18×25	405	18×25	405	18×30	418
82	820									18×30	443	18×30	443	18×35	443
100	101	10×20	349	16×25	360	16×25	386	16×25	405	18×30	489	18×32	489	18×40	520
120	121											18×35	570	18×45	592
150	151											18×35	616		640
220	221	13×25	662	16×35	680	18×30	690	18×35	710			18×45	800		
330	331	13×25	800	18×35	863	18×40	886								
470	471	16×30	1072												
1000	102	18×35	1980												

Maximum Allowable Ripple Current(mA rms) at 105℃ 120Hz