



Snap-in Terminal Type, Wide Temperature Range

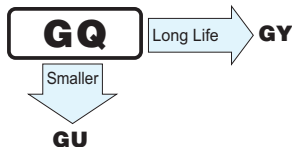
Series



RCJ Approved Anti-Solvent Feature (Through 100V only)

Approved by Reliability Center for Electronic Component. Japan-Certification No.RCJ-03-24D

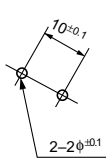
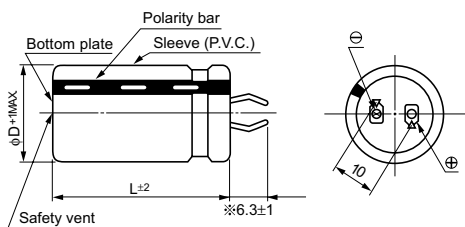
- Standard snap-in terminal series.
- Extended capacitance ranges based on the numerical values in E12 series under JIS.



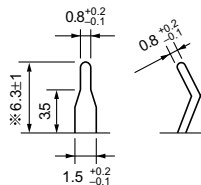
Specifications

Item	Performance Characteristics														
Operating Temperature Range	-40 ~ + 105°C (16 ~ 250V), -25 ~ + 105°C (315 ~ 450V)														
Voltage Range	16 ~ 450V														
Capacitance Range	56 ~ 47000μF														
Capacitance Tolerance	±20% at 120Hz, 20°C														
Leakage Current	$I \leq 3\sqrt{CV}$ (μA)(After 5 minutes' application of rated voltage)[C : Capacitance(μF), V : Voltage(V)]														
tan δ	Measurement frequency : 120Hz, Temperature : 20°C														
	Rated voltage(V)	16	25	35	50	63	80	100	160	180	200	250	315	400	450
	tan δ (MAX.)	0.50	0.40	0.35	0.30	0.25	0.20	0.20	0.15	0.15	0.15	0.15	0.25	0.25	0.25
Stability at Low Temperature	Measurement frequency : 120Hz														
	Rated voltage(V)	16 ~ 100			160 ~ 250			315 ~ 450							
	Impedance ratio	Z-25°C/Z + 20°C			4			3			8				
	ZT/Z20(MAX.)	Z-40°C/Z + 20°C			15			12			—				
Load Life	After an application of DC voltage (in the range of rated DC voltage even after over-lapping the specified ripple current) for 2000 hours at 105°C, capacitors shall meet the characteristics requirements indicated at right.														
	Capacitance change	Within ±20% of initial value													
	tan δ	200% or less of initial specified value													
Shelf Life	After leaving capacitors under no load at 105°C for 1000 hours they meet the requirements listed at right.														
	Capacitance change	Within ±15% of initial value													
	tan δ	150% or less of initial specified value													
	Leakage current	Initial specified value or less													
Marking	Printed with white color letter on dark brown sleeve.														
Applicable Standards	JIS C 5141 and JIS C 5102.														

Drawing



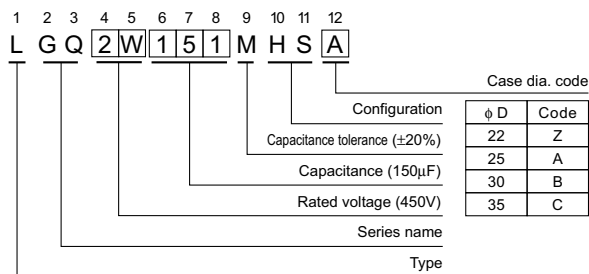
(PC board hole dimensions)



(Terminal dimensions)

* Shorter terminal(4.0±0.5)is also available upon request. Please refer page 163(GU series)for schematic of dimensions.

Type numbering system (Example : 450V 150μF)



Frequency coefficient of allowable ripple current

Frequency(Hz)	50	60	120	1 k	10k ~	
Coeff.	16 ~ 100V	0.88	0.90	1.00	1.15	1.15
	160 ~ 250V	0.85	0.88	1.00	1.15	1.20
	315 ~ 450V	0.88	0.90	1.00	1.10	1.15

Minimum order quantity : 50pcs.

Dimension table in next page.



■Dimensions

D×L(mm)

Cap.(μF)	V(Code) Code	φD	16V(1C)				25V(1E)				35V(1V)				50V(1H)						
			22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35			
1800	182																	22×25 1.31			
2700	272																	22×30 1.70	25×25 1.70		
3300	332											22×25 1.43						22×35 1.98	25×30 2.00		
3900	392											22×30 1.65						22×40 2.25	25×35 2.28	30×25 2.22	
4700	472					22×25 1.55						22×35 1.89	25×25 1.78					22×45 2.56	25×40 2.61	30×30 2.58	
5600	562					22×30 1.76						22×35 2.02	25×30 2.04	30×25 2.12				22×50 2.89	25×40 2.81	30×35 2.95	
6800	682	22×25 1.60				22×30 1.91	25×25 1.91					22×40 2.28	25×35 2.31						25×50 3.37	30×40 3.39	35×30 3.31
8200	822	22×30 1.85				22×35 2.14	25×30 2.16	30×25 2.25				22×50 2.67	25×40 2.60	30×30 2.56						30×45 3.71	35×35 3.66
10000	103	22×30 1.99	25×25 1.99			22×40 2.40	25×35 2.44						25×45 2.92	30×35 2.92						30×50 4.09	35×40 4.07
12000	123	22×35 2.28	25×30 2.30	30×25 2.38		22×45 2.69	25×40 2.74	30×30 2.70					25×50 3.26	30×40 3.28	35×30 3.20						35×45 4.50
15000	153	22×40 2.64	25×35 2.68				25×45 3.15	30×35 3.13	35×30 3.22					30×45 3.74	35×35 3.69						
18000	183	22×45 2.98	25×40 3.04	30×30 3.00			25×50 3.54	30×40 3.54							35×40 4.16						
22000	223		25×45 3.40	30×35 3.39				30×45 4.24	35×35 3.96						35×50 4.92						
27000	273		25×50 3.81	30×40 3.83	35×30 3.74				35×45 4.75												
33000	333			30×45 4.30	35×35 4.24				35×50 5.39												
39000	393			30×50 4.74	35×40 4.72																
47000	473				35×45 5.27																

Cap.(μF)	V(Code) Code	φD	63V(1J)				80V(1K)				100V(2A)										
			22	25	30	35	22	25	30	35	22	25	30	35							
560	561											22×25 1.07									
820	821					22×25 1.11						22×30 1.35	25×25 1.35								
1000	102					22×30 1.29	25×25 1.29					22×35 1.54	25×30 1.56								
1200	122	22×25 1.25				22×30 1.39	25×25 1.39					22×40 1.74	25×35 1.76	30×25 1.71							
1500	152	22×30 1.44	25×25 1.44			22×35 1.61	25×30 1.62					22×45 1.99	25×40 2.03	30×30 2.00							
1800	182	22×30 1.52	25×25 1.52			22×40 1.83	25×35 1.86	30×25 1.81					25×45 2.28	30×35 2.27							
2200	222	22×35 1.73	25×30 1.75			22×45 2.09	25×35 2.01	30×30 2.10					25×50 2.57	30×40 2.59	35×30 2.52						
2700	272	22×40 1.97	25×35 1.99	30×25 1.93			25×45 2.43	30×35 2.43						30×45 2.94	35×35 2.90						
3300	332	22×50 2.32	25×40 2.27	30×30 2.24			25×50 2.76	30×40 2.78	35×30 2.71					30×50 3.32	35×40 3.31						
3900	392		25×45 2.54	30×35 2.55				30×45 3.12	35×35 3.07						35×45 3.69						
4700	472		25×50 2.88	30×40 2.90	35×30 2.83			30×50 3.52	35×40 3.50						35×50 4.14						
5600	562			30×45 3.28	35×35 3.24				35×45 3.87												
6800	682			30×50 3.73	35×40 3.71				35×50 4.19												
8200	822				35×45 4.16																
10000	103				35×50 4.69																

Allowable Ripple (A rms) at 105°C 120Hz



■Dimensions

D×L(mm)

Cap.(μF)	V(Code) Code	φD	160V(2C)				180V(2Z)				200V(2D)				250V(2E)			
			22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
150	151																	22×25 0.65
180	181																	22×25 0.75
220	221																	22×30 25×25 0.85 0.85
270	271		22×25 0.90			22×25 0.90				22×25 0.90								22×35 25×30 30×25 1.00 1.00 1.00
330	331		22×25 1.00			22×30 1.05				22×30 25×25 1.05 1.05								22×40 25×30 30×25 1.10 1.10 1.10
390	391		22×30 1.15			22×30 25×25 1.20 1.20				22×35 25×30 1.25 1.25								22×45 25×40 30×30 1.25 1.25 1.25
470	471		22×35 25×25 1.30 1.30			22×35 25×30 1.30 1.30				22×40 25×30 30×25 1.35 1.35 1.35								22×50 25×40 30×35 35×25 1.30 1.30 1.30 1.30
560	561		22×40 25×30 1.45 1.45			22×40 25×35 30×25 1.40 1.40 1.40				22×45 25×35 30×30 1.50 1.50 1.50								25×50 30×35 35×30 1.55 1.55 1.55
680	681		22×45 25×35 30×25 1.65 1.65 1.65			22×45 25×40 30×30 1.65 1.65 1.65				22×50 25×45 30×30 35×25 1.70 1.70 1.70 1.70								30×45 35×35 1.80 1.80
820	821		22×50 25×40 30×30 35×25 1.80 1.80 1.80 1.80			22×50 25×45 30×35 35×25 1.85 1.85 1.85 1.85				25×50 30×35 35×30 1.90 1.90 1.90								35×40 1.95
1000	102		25×45 30×35 35×30 2.00 2.00 2.00			25×50 30×40 35×30 2.05 2.05 2.05				30×45 35×35 2.15 2.15								35×45 2.30
1200	122		25×50 30×40 35×30 2.30 2.30 2.30			30×45 35×35 2.30 2.30				30×50 35×40 2.30 2.30								35×50 2.65
1500	152		30×45 35×35 2.65 2.65			30×50 35×40 2.70 2.70				35×45 2.75								
1800	182		30×50 35×45 3.05 3.05			35×45 3.15				35×50 3.25								
2200	222		35×50 3.50			35×50 3.60												

Cap.(μF)	V(Code) Code	φD	315V(2F)				400V(2G)				450V(2W)							
			22	25	30	35	22	25	30	35	22	25	30	35				
56	560													22×25 0.41				
68	680					22×25 0.40				22×30 25×25 0.48 0.48								
82	820		22×25 0.46			22×30 25×25 0.50 0.50				22×35 0.56								
100	101		22×30 0.55			22×35 25×30 0.55 0.55				22×40 25×30 30×25 0.64 0.61 0.63								
120	121		22×30 25×25 0.60 0.60			22×40 25×30 30×25 0.60 0.60 0.60				22×45 25×35 0.72 0.71								
150	151		22×35 25×30 30×25 0.70 0.70 0.70			22×45 25×35 30×30 0.70 0.70 0.70				22×50 25×40 30×30 35×25 0.83 0.81 0.80 0.82								
180	181		22×40 25×30 30×25 0.83 0.78 0.82			22×50 25×40 30×30 35×25 0.85 0.85 0.85 0.85				25×45 30×35 0.92 0.91								
220	221		22×45 25×35 30×30 0.90 0.90 0.90			25×45 30×35 35×30 0.90 0.90 0.90				25×50 30×40 35×30 1.05 1.05 1.03								
270	271		22×50 25×40 30×35 35×25 1.00 1.00 1.00 1.00			25×50 30×40 35×30 1.00 1.00 1.00				30×45 35×35 1.21 1.19								
330	331		25×50 30×35 35×30 1.25 1.25 1.25			30×45 35×35 1.25 1.25				30×50 35×40 1.38 1.38								
390	391		30×40 35×35 1.35 1.35			30×50 35×40 1.35 1.35				35×45 1.55								
470	471		30×50 35×40 1.45 1.45			35×45 1.45				35×50 1.74								
560	561		35×45 1.65			35×50 1.65												
680	681		35×50 1.90															

Allowable Ripple (A rms) at 105°C 120Hz