

GQ

Snap-In Terminal Type, Wide Temperature Range

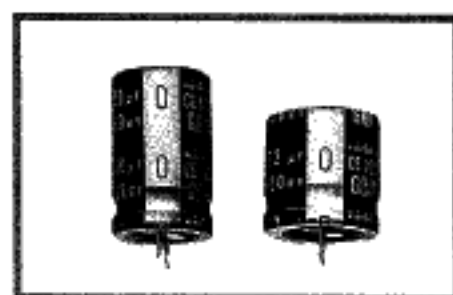
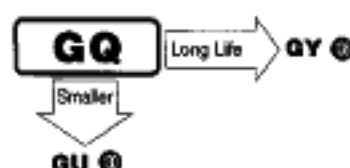
Series



ROJ Approved

Anti-Solvent
Feature
(Through 180V and)Approved by Reliability Center for Electronic
Component, Japan-Certification No. RCJ-03-24C

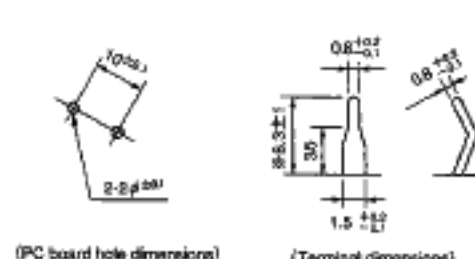
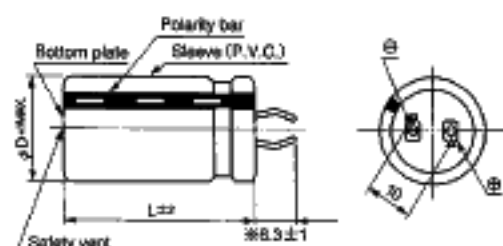
- Standard snap-in terminal series.
- Extended capacitance ranges based on the numerical values in E12 series under JIS.



Specifications

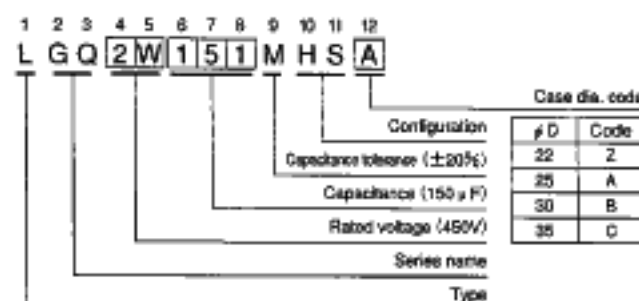
Item	Performance Characteristics														
Operating Temperature Range	-40~+105℃ (16~250V), -25~+105℃ (315~450V)														
Voltage Range	16~450V														
Capacitance Range	56~47000 μF														
Capacitance Tolerance	±20% at 120Hz, 20℃														
Leakage Current	I≤3√CV (μA) (After 5 minutes' application of rated voltage) (C : Capacitance (μF), V : Voltage (V))														
tan δ	Measurement frequency : 120Hz, Temperature : 20℃														
	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℃/Z+20℃	4				3				8				
	ZT/220 (MAX.)	Z-40℃/Z+20℃	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℃, 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℃ 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												
Marking	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

Type numbering system (Example: 450V 150 μ F)

(PC board hole dimensions)

(Terminal dimensions)



* Shorter terminal (4.0 \pm 0.5) is also available upon request.
Please refer page 130 (GU series) for schematic of dimensions.

Frequency coefficient of allowable ripple current

Frequency (Hz)	50	60	120	1 k	10k~
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

• Dimension table in next page.

GQ series

■ Dimensions

DXL (mm)

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

Cap. (μF)	V (Code)	Case	φD	63 (1J)				80 (1K)				100 (2A)			
				22	25	30	35	22	25	30	35	22	25	30	35
560	561											22×25			
												1.07			
820	821							22×25				22×30	25×25		
								1.11				1.35	1.35		
1000	102							22×30	25×25			22×35	25×30		
								1.29	1.29			1.54	1.56		
1200	122			22×25				22×30	25×25			22×40	25×35	30×25	
				1.25				1.39	1.39			1.74	1.76	1.71	
1500	152			22×30	25×25			22×35	25×30			22×45	25×40	30×30	
				1.44	1.44			1.61	1.62			1.99	2.03	2.00	
1800	182			22×30	25×25			22×40	25×35	30×25		25×45	30×35		
				1.52	1.52			1.83	1.86	1.81		2.28	2.27		
2200	222			22×35	25×30			22×45	25×35	30×30		25×50	30×40	35×30	
				1.73	1.75			2.09	2.01	2.10		2.57	2.59	2.52	
2700	272			22×40	25×35	30×25		25×45	30×35					30×45	35×35
				1.97	1.99	1.93		2.43	2.43					2.94	2.90
3300	332			22×50	25×40	30×30		25×50	30×40	35×30				30×50	35×40
				2.32	2.27	2.24		2.78	2.78	2.71				3.32	3.31
3900	392			25×45	30×35			30×45	35×35						35×45
				2.54	2.55			3.12	3.07						3.89
4700	472			25×50	30×40	35×30		30×50	35×40						35×50
				2.68	2.90	2.83		3.62	3.50						4.14
5600	562				30×45	35×35			35×45						
					3.28	3.24			3.87						
6800	682				30×50	35×40			35×50						
					3.73	3.71			4.19						
8200	822					35×45									
						4.18									
10000	103					35×50									
						4.69									

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

GQ series

■ Dimensions

DXL (mm)

Cap. (μF)	V (Code)	φD	160 (2C)				180 (2Z)				200 (2D)				250 (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					22×25				22×25				22×35	25×30	30×25	
		0.90					0.90				0.90				1.00	1.00	1.00	
330	331	22×25					22×30				22×30	25×25			22×40	25×30	30×25	
		1.00					1.05				1.05	1.05			1.10	1.10	1.10	
390	391	22×30					22×30	25×25			22×35	25×30			22×45	25×40	30×30	
		1.15					1.20	1.20			1.25	1.25			1.25	1.25	1.25	
470	471	22×35	25×25				22×35	25×30			22×40	25×30	30×25		22×50	25×40	30×35	35×25
		1.30	1.30				1.30	1.30			1.35	1.35	1.35		1.30	1.30	1.30	1.30
560	561	22×40	25×30				22×40	25×35	30×25		22×45	25×35	30×30			25×50	30×35	35×30
		1.45	1.45				1.40	1.40	1.40		1.50	1.50	1.50			1.55	1.55	1.55
680	681	22×45	25×35	30×25			22×45	25×40	30×30		22×50	25×45	30×30	35×25			30×45	35×35
		1.65	1.65	1.65			1.65	1.65	1.65		1.70	1.70	1.70	1.70			1.80	1.80
820	821	22×50	25×40	30×30	35×25		22×50	25×45	30×35	35×25		25×50	30×35	35×30				35×40
		1.80	1.80	1.80	1.80		1.85	1.85	1.85	1.85		1.90	1.90	1.90				1.95
1000	102		25×45	30×35	35×30			25×50	30×40	35×30			30×45	35×35				35×45
			2.00	2.00	2.00			2.05	2.05	2.05			2.15	2.15				2.30
1200	122		25×50	30×40	35×30				30×45	35×35			30×50	35×35				35×50
			2.30	2.30	2.30				2.30	2.30			2.30	2.30				2.65
1600	152			30×45	35×35				30×50	35×40				35×45				
				2.65	2.65				2.70	2.70				2.75				
1800	182			30×50	35×45					35×45				35×50				
				3.05	3.05					3.15				3.25				
2200	222				35×50					35×50								
					3.50					3.60								

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

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