GS Series

Features

- Wide CV value range.
- Load life 2000 hrs at 85℃
- Safety vent construction design.
- For detail specifications ,please refer to Engineering Bulletin No.E101

Specifications

Item	Performance Characteristics	
Operating Temperature Range	-40~+85℃	-25~+85℃
Rate Voltage Range	6.3~100VDC	160~450VDC
Capacitance Range	0.1~33000uf	0.47~470uf
Capacitance Tolerance	±20%（120Hz，+20℃）	
Leakage current （+20℃,max.）	I≤0.01CV或3（μA）	I≤0.03CV（μA）
	After 1 minutes, whichever is greater measured with rated working voltage applied	

Dissipation factor （tgδ）

Working Voltage(VDC)	6.3	10	16	25	35	50	63	100
D.F(%)max	22	19	16	14	12	10	9	8

Working Voltage(VDC)	160	200	250	350	400	450
D.F(%)max	12	12	12	15	15	17

For capacitance>1000μF , Add 2% per another 1000μF (120Hz，+20℃)

Low Temperature Characteristics （120Hz）

Impedance ratio max.

Working Voltage(VDC)	6.3	10	16	25	35	50	63	100
Z-25℃/ Z+20℃	4	3	2	2	2	2	2	2
Z-40℃/ Z+20℃	8	6	4	3	3	3	3	3

Working Voltage(VDC)	160	200	250	350	400	450
Z-25℃/ Z+20℃	2	2	3	5	15	15

For capacitance>1000μF , Add 0.5 per another 1000μF For Z-25℃/ Z+20℃
Add 1.0 per another 1000μF For Z-40℃/ Z+20℃

Load Life

Test conditions
Duration time : 2000Hrs
Ambient temperature : +85℃
Applied voltage : Rated DC working voltage
After test requirement at +20℃
Capacitance change : ≤±20% of the initial measured value
Dissipation factor : ≤200% of the initial specified value
Leakage current : ≤The initial specified value

Shelf Life

Test conditions
Duration time : 1000Hrs
Ambient temperature : +85℃
Applied voltage : None
After test requirement at +20℃ : Same limits as Load life.
Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes

Multiplier for Ripple Current vs. Frequency

CAP(μF) Frequency (Hz)	50(60)	120	400	1k	10k	50k-100k
CAP ≤ 10	0.8	1	1.30	1.45	1.65	1.70
10<CAP≤ 100	0.8	1	1.23	1.36	1.48	1.53
100<CAP≤1000	0.8	1	1.16	1.25	1.35	1.38
1000 < CAP	0.8	1	1.11	1.17	1.25	1.28

Multiplier for Ripple Current vs. Temperature

Temperature℃	45	60	70	85
Factor	1.8	1.5	1.3	1.0

GS series

Diagram of Dimensions

ΦD	5	6.3	8		10	13	16	18	22
F	2.0	2.5	3.5		5.0	5.0	7.5	7.5	10
Φd	0.5		L<20	L≥20	0.6		0.8		
			0.5	0.6					

a	D<18	D=18		D>18
		L<35.5	L≥35.5	
	1.5	1.5	2.0	2.0

Case Size

ΦD×L

Voltage	6.3V		10V		16V		25V		35V	
Cap(μF)	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
4.7							5×11	34	5×11	44
10					5×11	44	5×11	50	5×11	66
22			5×11	66	5×11	83	5×11	94	5×11	108
33	5×11	72	5×11	88	5×11	84	5×11	105	5×11	121
47	5×11	88	5×11	105	5×11	132	5×11	132	5×11	143
									6.3×12	154
68	5×11	110	5×11	132	5×11	149	6.3×12	176	6.3×12	198
100	5×11	143	5×11	198	5×11	176	6.3×12	209	6.3×12	231
					6.3×12	204			8×12	253
120	5×11	165	5×11	209	6.3×12	231	6.3×12	253	8×12	275
150	5×11	198	5×11	231	6.3×12	253	6.3×12	275	8×12	308
180	5×11	220	6.3×12	253	6.3×12	275	6.3×12	280	8×12	352
							8×12	319		
220	5×11	242	6.3×2	294	6.3×12	308	6.3×12	310	8×12	385
	6.3×12	264			8×12	352	8×12	363	10×13	407
330	6.3×12	330	6.3×12	363	8×12	407	8×12	451	10×13	528
							10×13	484	10×16	539
470	6.3×12	385	6.3×12	418	8×12	517	8×12	561	10×16	693
	8×12	418	8×12	440			10×13	594	10×20	748
560	8×12	473	8×12	506	10×13	573	10×16	693	10×20	847
680	8×12	539	8×12	572	8×16	640	10×16	792	10×20	891
					10×13	682	10×20	825		
820	8×12	605	10×13	671	10×16	803	10×20	891	13×21	1045
1000	8×12	649	8×16	725	10×16	869	10×20	1050	13×21	1265
	10×13	715	8×20	803						
			10×13	726						
1200	10×13	814	10×16	902	10×16	979	13×21	1155	13×21	1375
1500	10×16	935	10×16	1001	10×20	1100	13×21	1353	13×25	1570
1800	10×16	1035	10×20	1089	13×21	1298	13×21	1496	16×25	1749
2200	10×20	1135	10×20	1210	13×21	1485	13×25	1705	16×25	1870
			13×21	1330					16×32	1980

Ripple Current (mA,rms) at 85℃ 120KHz