

## CGS series

- Chip type with 6.3Φ~16Φ, 125°C, 2000 hours, long life product
- Designed for automobile modules and other high temperature applications
- AEC-Q200 Compliant
- RoHS Compliant



### SPECIFICATIONS

Items	Characteristics									
Capacitance Tolerance	±20% (120Hz, 20°C)									
Operating Temperature Range	-55°C ~ +125°C									
Rated Voltage Range	6.3 ~ 100VDC									
Capacitance Range	1 ~ 4700μF									
Leakage Current	$I \leq 0.01CV$ or $3(\mu A)$ , which is greater. (After 3 minutes application of DC rated voltage at 20°C)									
Dissipation Factor (tan δ)	Measurement Frequency:120Hz. Temperature: 20°C									
	Rated Voltage(V)	6.3	10	16	25	35	50	63	100	
	tanδ ( Max)	0.30	0.24	0.20	0.16	0.14	0.14	0.12	0.10	
Low Temperature Stability	Measurement Frequency:120Hz									
	Rated Voltage(V)	6.3	10	16	25	35	50	63	100	
	Z(-25°C) / Z(20°C)	4	3	2	2	2	2	2	2	2
Impedance Ratio(Max)	Z(-40°C) / Z(20°C)	8	6	4	3	3	3	3	3	3
	6.3V~50V: 2000 hours (ΦD=6.3mm, 1000 hours); 63V~100V: 1500 hours with application of rated voltage at 125°C									
	Capacitance Change	within ±30% of Initial Value								
tan δ	300% or less of Initial Specified Value									
Leakage Current	Initial Specified Value or less									
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hours 125°C without voltage applied. Before the measurement, the capacitance shall be preconditioned by applying voltage according to them 4.1 of JIS C5101-4.									
	Capacitance Change	Within ±30% of Initial Value								
	tan δ	300% or less of Initial Specified Value								
	Leakage Current	Initial Specified Value or less								
Resistance to Soldering Heat	The capacitors shall be kept on the hott plate maintained at 250°C for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the characteristics requirements listed at right.								Capacitance Change	Within ± 10% of Initial Value
									tan δ	Initial Specified Value
									Leakage Current	Initial Specified Value or less
Marking	Black print on the case top									

### Frequency Coefficient of Permissible Ripple Current

Frequency (Hz) \ Capacitance (μF)	100 ≤ F < 1K	1K ≤ F < 10K	10K ≤ F < 100K	100K ≤ F
C ≤ 22	0.50	0.80	0.90	1.00
22 < C ≤ 150	0.65	0.85	0.92	1.00
150 < C	0.70	0.85	0.95	1.00

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.

## DIMENSIONS(mm)

### ■ Chip Type

Fig.1  $\Phi D=6.3\sim 10\text{mm}$

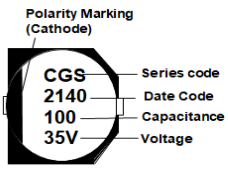
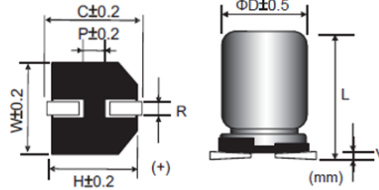
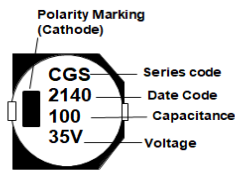
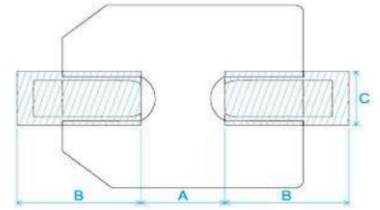


Fig.2  $\Phi D \geq 12.5\text{mm}$



### ■ Land / Pad pattern



Size	$\Phi D$	L	W	H	C	R	P	Vmax
5*6	5.0	6±0.3	5.3	5.3	5.9	0.5~0.8	1.5	0.3
6.3*7.7	6.3	7.7±0.3	6.6	6.6	7.2	0.5~0.8	2.1	0.3
8*10	8.0	10±0.5	8.3	8.3	9.0	0.7~1.1	3.2	0.3
10*10	10.0	10±0.5	10.3	10.3	11.0	0.7~1.3	4.5	0.3
12.5*13.5	12.5	13.5±0.5	13.0	13.0	13.7	1.1~1.4	4.5	0.4
16*16.5	16.0	16.5±0.5	17.0	17.0	18.0	1.4~1.8	6.4	0.4

DxL	A	B	C
$\Phi 4$	1	2.6	1.6
$\Phi 5$	1.4	3	1.6
$\Phi 6.3$	1.9	3.5	1.6
$\Phi 8$	3	3.5	2.5
$\Phi 10$	4	4	2.5
$\Phi 12.5$	4.3	5.8	2.5
$\Phi 16$	6.6	6.5	5
$\Phi 18$	6.6	7.7	5
$\Phi 8(G)$	2.5	4.5	4.7
$\Phi 10(G)$	3.8	4.8	4.7
$\Phi 12.5(G)$	3.8	6.1	6.9
$\Phi 16(G)$	5	8	9.5
$\Phi 18(G)$	5	8.6	9.5

"(G)" "Anti-vibration Structure"

## Electric Characteristics

Su'scon P/N	Cap. ( $\mu\text{F}$ )	Cap. Tol. (%)	Rate Volt. (V-DC)	Surge Volt. (V-DC)	Oper. Temp. ( $^{\circ}\text{C}$ )	Nominal Case Size D*L(mm)	Leakage Current Max ( $\mu\text{A}$ )	D.F. MAX (%)	R.C 100KHz (mA rms)	IMP 100KHz at 25 $^{\circ}\text{C}$ ( $\Omega$ )Max	Load Life (hours)
CGS035M101F10PE50V00A	100	±20	35	40.3	125	8*10	35	14	220	0.300	2000
CGS035M100D06PE50V00R	10	±20	35	40.3	125	5*6	3.5	14	81	1.50	1000

### REMARKS:

1. Dissipation Factor Test: at 20 $^{\circ}\text{C}$ , 120 Hz
2. Capacitance Test: at 20 $^{\circ}\text{C}$ , 120 Hz
3. Ripple Current Test: at 125 $^{\circ}\text{C}$ , 100K Hz
4. Leakage Current: Initial specified value or less
5. When have characteristic requested: Load life & shelf life test and etc., judgment standard reference to our catalogue.
6. Remarks: Su'scon Part Number with suffix code "A" is specially offered for automotive project, which meets AEC-Q200 standard.

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**CGS-REV.1**