

CM SERIES

Chip type, For surface mounting

Features

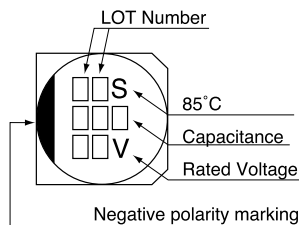
- Life time : 85°C, 2000 hours
- Miniature of CS
- Expand up to D=10 case sizes
- For surface mounting



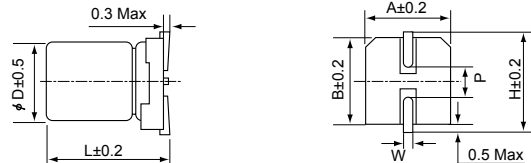
Specifications

Item	Performance Characteristics							
Operating temperature range	-40°C - +85°C							
Rated working voltage range	6.3V - 50V							
Nominal capacitance range	4.7 μ F - 1000 μ F, +20%(at 20°C, 120Hz)							
D.C Leakage current(at 20°C)	$I \leq 0.01CV$ or $3\mu A(2min)$, Whichever is greater.							
Tan δ (max., at 20°C, 120Hz)	W.V(V)	6.3	10	16	25	35	50	
	Tan δ	0.35	0.26	0.20	0.15	0.15	0.12	
Characteristics at low temperature (max.) (impedance ratio at 120Hz)	W.V(V)	6.3	10	16	25	35	50	
	Z 25°C/Z 20°C	4	3	2	2	2	2	
	Z 40°C/Z 20°C	8	6	4	4	3	3	
Load life	After applying rated working voltage for 2000 hours at +85°C, and then being stabilized at +20°C, capacitors shall meet following limits.							
	Capacitance change	Within +- 20% of the initial measured value						
	Tan δ	$\leq 200\%$ of the initial specified value						
	Leakage current	\leq The initial specified value						
Shelf life	After storage for 1000 hours at +85°C with no voltage applied and then being stabilized at +20°C, capacitors shall meet load life specification.							
Resistance to soldering heat	After reflow soldering(Refer to reflow soldering temperature profile ; see page 10) and then being stabilized at +20°C, capacitors shall meet following limits.							
	Capacitance change	Within +-10% of the initial measured value						
	Tan δ	\leq The initial specified value						
	Leakage current	\leq The initial specified value						

Marking



Dimensions in mm (not to scale)



Size code	2D	L	A	B	P	H	W
B	4	5.3	4.3	4.3	1.0	5.0	0.5~0.8
C	5	5.3	5.3	5.3	1.5	5.9	0.5~0.8
D	6.3	5.3	6.6	6.6	2.0	7.2	0.5~0.8
D ₁	6.3	5.7	6.6	6.6	2.0	7.2	0.5~0.8
D ₂	6.3	7.7	6.6	6.6	2.0	7.2	0.5~0.8
E	8	6.3	8.3	8.3	2.3	9.0	0.5~0.8
F	8	10.0	8.3	8.3	3.1	9.0	0.8~1.1
G	10	10.0	10.3	10.3	4.5	11.0	0.8~1.1

Dimensions & Maximum permissible ripple

Cap(μ F)	W.V(V)		6.3(0J)		10(1A)		16(1C)		25(1E)		35(1V)		50(1H)			
	SIZE	I _R	SIZE	I _R	SIZE	I _R	SIZE	I _R	SIZE	I _R	SIZE	I _R	SIZE	I _R		
4.7													B	20		
10									B	24	B	26	C	30		
22							B	28	C	30	D	60	D	50		
33	B	30	B	35	C	35	C	40	D	65	D	70	D ₁	E	65	
47	C	46	C	43	C	39	D	65	D	65	D ₂	E	110	D ₂	F	155
100	D	71	D	70	D ₁	E	70	E	155	D ₂	F	180	G		G	200
220	D ₁	E	86	D ₂	E	250	D ₂	F	260	D ₂	G	280	G			
330	D ₂	E	190	F	330	F	280	G	350							
470	F	252	G	400	G / F	460										
1000	G	470														

I_R : Maximum permissible ripple current [mA(rms) at 85°C, 120Hz]