SURGE
Components Inc.
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CAE-M SURFACE MOUNT TYPE ULTRA MINI VERSION, 3MM IN DIAMETER
CAE-S SURFACE MOUNT TYPE STANDARDS

RoHS Compliant

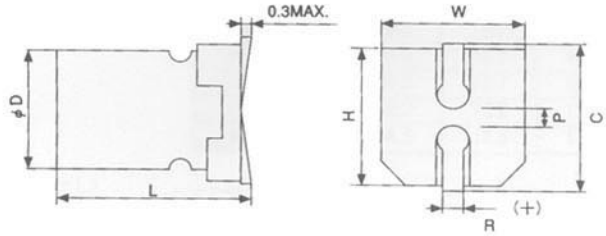
FEATURES
☐ SOLVENT PROOF (WITHIN 2 MINUTES).

SPECIFICATIONS

ITEMS		SPECIFICATIONS								
RATED VOLTAGE (V)		4	6.3	10	16	25	35	50	63	100
OPERATING TEMPERATURE RANGE (°C)		-40 to +85								
CAPACITANCE TOLERANCE (%)		±20 (120Hz)								
TANGENT OF LOSS ANGLE (TAN δ) (MAX.) (120Hz)	ø3	0.40	0.30	-	0.19	0.16	0.14	0.14	-	-
	ø4 to ø 6.3	0.35	0.26	0.20	0.16	0.14	0.12	0.12	0.12	0.10
	ø8 to ø16	0.40	0.30	0.24	0.20	0.16	0.14	0.12	0.12	0.10
		0.02 to be added to the above value every time nominal capacitance exceeds 1000 µF								
LEAKAGE CURRENT (L.C.) (µA/after 2min.)(MAX.)		The greater value of either 0.01CV or 3								
IMPEDANCE (120HZ) RATIO AT LOW TEMPERATURE (MAX.)	$Z_{-25°C}/Z_{20°C}$	7	4	3	2	2	2	2	2	2
	$Z_{-40°C}/Z_{20°C}$	15	8	6	4	4	3	3	3	3
HIGH TEMPERATURE LOAD RATED VOLTAGE APPLIED	TEST	85°C 2000 hrs.								
	Δ C/C	Within ± 20% of the initial value								
	tan δ	≤ Twice the initial standard								
	L.C.	≤ The initial standard								
RESISTANCE TO SOLDERING HEAT	TEST	Capacitors placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward downward will fulfill the following conditions after being cooled to room temperature.								
	Δ C/C	Within ± 10% of the initial value								
	tan δ	≤ The initial standard								
	L.C.	≤ The initial standard								
OTHER CHARACTERISTICS		Conform to IEC 60384-18								

DIMENSIONS

(unit ; mm)



$D_{+0.5MAX.}$	L	$W_{±0.2}$	$H_{±0.2}$	$C_{±0.2}$	R	$P_{±0.2}$
3	5.4 $^{+0.1}_{-0.2}$	3.3	3.3	3.9	0.45 to 0.75	0.6
4	5.4 $^{+0.1}_{-0.2}$	4.3	4.3	5.0	0.5 to 0.8	1.0
5	5.4 $^{+0.1}_{-0.2}$	5.3	5.3	6.0	0.5 to 0.8	1.4
6.3	5.4 $^{+0.1}_{-0.2}$	6.6	6.6	7.3	0.5 to 0.8	2.2
4	6.0 ±0.3	4.3	4.3	5.0	0.5 to 0.8	1.0
6.3	6.0 ±0.3	6.6	6.6	7.3	0.5 to 0.8	2.2
6.3	7.7 ±0.3	6.6	6.6	7.3	0.5 to 0.8	2.2
8	10.2 ±0.3	8.3	8.3	9.0	0.7 to 1.0	3.2
10	7.7 ±0.3	10.3	10.3	11.0	1.1 to 1.4	4.6
10	10.2 ±0.3	10.3	10.3	11.0	1.1 to 1.4	4.6
12.5	13.5 ±0.5	12.8	12.8	13.5	1.1 to 1.4	4.6
16	16.5 ±0.5	16.3	16.3	17.0	1.8 to 2.1	7.0

DIMENSIONS

µF \ V	4		6.3		10		16		25		35		50		63		100	
0.1 to 0.47													4x5.4 ✥	1 to 5(1 to 4)	4x5.4	1 to 5		
1.0													4x5.4 ✥	10(8)	4x5.4	10	4x6.0	10
2.2											✥	(8)	4x5.4 ✥	15(10)	4x5.4	15	6.3x6.0	20
3.3											✥	(10)	4x5.4	18	5x5.4	20	6.3x6.0	28
4.7									4x5.4 ✥	19(12)	4x5.4	20	5x5.4	23	5x5.4	23	6.3x6.0	35
10							4x5.4 ✥	25(18)	5x5.4	28	5x5.4	30	6.3x5.4	34	6.3x5.4	34	6.3x7.7	50
22	✥	(19)	4x5.4 ✥	31(19)	5x5.4	35	5x5.4	39	6.3x5.4	52	6.3x5.4	54	6.3x6.0	45	6.3x7.7	70	8x10.2	120
33	4x5.4	26	5x5.4	39	5x5.4	43	6.3x5.4	57	6.3x5.4	63	6.3x6.0	60	6.3x7.7	85	8x10.2	160	10x10.2	190
47	4x5.4	34	5x5.4	47	6.3x5.4	59	6.3x5.4	68	6.3x6.0	68	6.3x6.0	70	6.3x7.7	90	8x10.2	170	12.5x13.5	330
82													10x7.7	200				
100	5x5.4	61	6.3x5.4	71	6.3x5.4	76	6.3x5.4	86	6.3x7.7	130	6.3x7.7	120	8x10.2	200	10x10.2	280		
150					6.3x6.0	88	6.3x7.7	135	8x10.2	200	8x10.2	220					16x16.5	560
220	6.3x5.4	82	6.3x6.0	95	6.3x7.7	150	6.3x7.7	150	8x10.2	250	10x7.7	220						
330	6.3x6.0	102	6.3x7.7	150	8x10.2	280	8x10.2	280	8x10.2	310	8x10.2	270	10x10.2	320	12.5x13.5	410		
390							10x7.7	280			10x10.2	340						
470	6.3x7.7	150	8x10.2	300	8x10.2	300	8x10.2	330	10x10.2	430	12.5x13.5	590	12.5x13.5	550				
680					10x7.7	300									16x16.5	700		
1000			10x7.7	300			10x10.2	450			12.5x13.5	610						
1500	10x7.7	330	8x10.2	330	10x10.2	450			12.5x13.5	660			16x16.5	940				
2200			10x10.2	450			12.5x13.5	710			16x16.5	1160						
3300					12.5x13.5	730			16x16.5	1150								
4700			12.5x13.5	750			16x16.5	1200										
6800			16x16.5	1330	16x16.5	1260												

Model No.
16CAE10S
- 10µF, Capacitance symbol
- 16V, Rated voltage

Ripple Current
mA r.m.s.
(120Hz, 85°C)