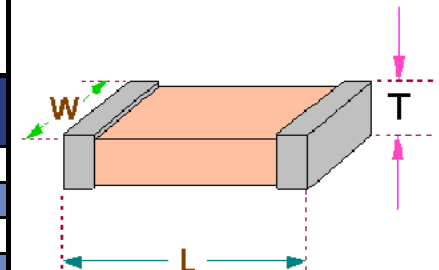


KEMET Ceramic Surface Mount Capacitors
High Voltage (≥ 500Vdc), ArcShield, X7R, 68nF, 1000 Vdc, 1210 Case Size
Qualification per Q-200 Rev. D and Results Summary - Lot Id. 0118T011806

		Initial Readings			Post Test Readings		
		Capacitance, nF	DF, 120 Hz, %	IR, 25°C, MOhm	Delta Cap, %	DF, 120 Hz, %	IR, 25°C, MOhm
Resistance to Soldering Heat	Limits	54.4 - 81.6	2.50	1471.00	n/a	2.50	1471.00
<i>Test Condition D. Pre-heat condition of 150°C, 60-120sec is allowed for ceramic components</i>	AVG	75.30	1.00	54300.00	-0.960	1.06	61400.00
	STD	0.05	0.02	1.32	0.346	0.04	1.44
	Max	76.30	1.05	63900.00	-0.405	1.12	78300.00
	Min	74.27	0.95	20000.00	-1.703	0.90	1.59
Mechanical Shock / Vibration	Limits	54.4 - 81.6	2.50	1471.00	n/a	2.50	1471.00
<i>Method 213: Figure 1, Condition F. Method 204: 12 cycles of 5 g for 20 minutes</i>	AVG	75.50	1.06	56000.00	-0.153	0.98	54900.00
	STD	0.03	0.02	1.12	0.484	0.06	1.09
	Max	76.40	1.09	62000.00	0.997	1.10	61500.00
	Min	75.00	1.01	42000.00	-1.115	0.89	44500.00

		Electrical Characterization			
		-55°C Delta Cap (%)	Reference Capacitance @ 25°C, nF	+125°C Delta Cap (%)	IR, 125°C MOhm
Temperature Coefficient Characterization (TCC)	Limits	± 15	54.4 - 81.6	± 15	147.10
<i>KEMET Custom Test: Parametrically test, show statistics at room, min, and max operating temperatures.</i>	AVG	-9.65	73.80	-9.79	2971.97
	STD	0.50	0.03	0.83	1.06
	Max	-8.69	74.50	-8.35	3290.00
	Min	-11.44	73.30	-11.89	2670.00



Other Mechanical / Performance Results		
ESD, per AEC-Q200-002	Class	4
Beam Load, per AEC-Q200-003, MPascal, MPa	AVG	73
	STD	17
	Max	98
	Min	50

Dimensions, mm			
	Length	Width	Thickness
Limits	2.9 - 3.7	2.3 - 2.7	2.05 - 2.45
AVG	3.30	2.57	2.33
STD	0.06	0.03	0.03
Max	3.34	2.64	2.38
Min	3.03	2.51	2.27



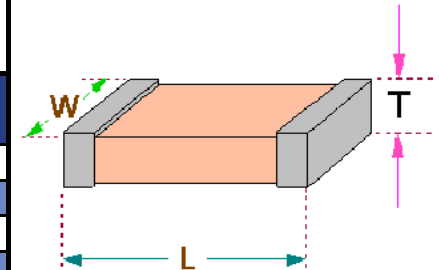
KEMET Ceramic Surface Mount Capacitors
High Voltage ($\geq 500\text{Vdc}$), ArcShield, X7R, $0.33\mu\text{F}$, 1000 Vdc, 1812 Case Size
 Qualification per Q-200 Rev. D and Results Summary - Lot Id. 0123T012310

		Initial Readings			Post Test Readings		
		Capacitance, μF	DF, 120 Hz, %	IR, 25°C, MOhm	Delta Cap, %	DF, 120 Hz, %	IR, 25°C, MOhm
High Temperature Life	Limits	0.264 - 0.396	2.50	303.00	± 20	3.00	30.30
<i>125°C, 1.2x Rated Voltage, 1000 Hours</i>	AVG	0.343	1.20	5790.00	-9.089	1.26	4570.00
	STD	0.0012	0.02	1.08	0.485	0.02	1.12
	Max	0.346	1.24	6360.00	-8.346	1.30	5550.00
	Min	0.341	1.15	4370.00	-10.234	1.18	3840.00
Storage Life	Limits	0.264 - 0.396	2.50	303.00	± 20	3.00	30.30
<i>125°C, 0 Volts, 1000 Hours</i>	AVG	0.339	1.00	7350.00	-9.384	1.26	9410.00
	STD	0.0013	0.01	1.05	0.772	0.02	1.20
	Max	0.343	1.06	8000.00	-8.487	1.29	12600.00
	Min	0.337	0.98	6700.00	-10.552	1.23	7140.00
Load Humidity	Limits	0.264 - 0.396	2.50	303.00	± 20	3.00	30.30
<i>85°C, 85% RH, 200 Vdc max., 1000 Hours</i>	AVG	0.339	0.98	6500.00	-7.597	1.29	6870.00
	STD	0.0013	0.02	1.06	1.120	0.06	1.15
	Max	0.342	1.04	7080.00	-5.386	1.34	7590.00
	Min	0.336	0.95	4730.00	-11.190	1.08	2120.00
Low Volt Humidity	Limits	0.264 - 0.396	2.50	303.00	± 20	3.00	30.30
<i>85°C, 85% RH, 1.5 Volts, 1000 Hours</i>	AVG	0.340	1.02	7380.00	-0.007	1.15	53100.00
	STD	0.0012	0.01	1.21	0.228	0.19	2.92
	Max	0.344	1.06	10500.00	0.282	1.49	789000.00
	Min	0.338	1.00	5930.00	-0.863	1.02	8870.00
Temperature Cycle	Limits	0.264 - 0.396	2.50	303.00	n/a	2.50	303.00
<i>-55°C to +125°C, 1000 Cycles</i>	AVG	0.340	1.00	6450.00	-2.479	0.92	5780.00
	STD	0.0012	0.01	1.03	0.115	0.01	1.05
	Max	0.343	1.03	6800.00	-2.220	0.96	6260.00
	Min	0.337	0.97	6050.00	-2.751	0.89	5280.00

KEMET Ceramic Surface Mount Capacitors
High Voltage (≥ 500Vdc), ArcShield, X7R, 0.33μF, 1000 Vdc, 1812 Case Size
 Qualification per Q-200 Rev. D and Results Summary - Lot Id. 0123T012310

		Initial Readings			Post Test Readings		
		Capacitance, μF	DF, 120 Hz, %	IR, 25°C, MOhm	Delta Cap, %	DF, 120 Hz, %	IR, 25°C, MOhm
Resistance to Soldering Heat	Limits	0.264 - 0.396	2.50	303.00	n/a	2.50	303.00
<i>Test Condition D. Pre-heat condition of 150°C, 60-120sec is allowed for ceramic components</i>	AVG	0.338	1.07	5320.00	-2.790	1.20	5670.00
	STD	0.0011	0.02	1.05	0.765	0.02	1.06
	Max	0.340	1.11	5770.00	-0.620	1.24	6280.00
	Min	0.336	1.04	4880.00	-3.694	1.13	5040.00
Mechanical Shock / Vibration	Limits	0.264 - 0.396	2.50	303.00	n/a	2.50	303.00
<i>Method 213: Figure 1, Condition F. Method 204: 12 cycles of 5 g for 20 minutes</i>	AVG	0.339	1.09	5400.00	0.265	1.12	4390.00
	STD	0.0016	0.02	1.05	0.362	0.05	1.04
	Max	0.342	1.16	5850.00	0.860	1.20	4720.00
	Min	0.336	1.05	4850.00	-0.590	0.99	4030.00

		Electrical Characterization			
		-55°C Delta Cap (%)	Reference Capacitance @ 25°C, μF	+125°C Delta Cap (%)	IR, 125°C MOhm
Temperature Coefficient Characterization (TCC)	Limits	± 15	0.264 - 0.396	± 15	30.30
<i>KEMET Custom Test: Parametrically test, show statistics at room, min, and max operating temperatures.</i>	AVG	-9.08	0.335	-12.43	513.52
	STD	0.35	0.0014	0.98	1.10
	Max	-8.10	0.338	-11.01	586.00
	Min	-9.54	0.332	-14.46	421.00



Other Mechanical / Performance Results		
ESD, per AEC-Q200-002	Class	4
Beam Load, per AEC-Q200-003, MPascal, MPa	AVG	181
	STD	22
	Max	226
	Min	150

Dimensions, mm			
	Length	Width	Thickness
Limits	4.2 - 4.8	2.9 - 3.5	1.9 - 2.3
AVG	4.57	3.14	2.05
STD	0.02	0.02	0.02
Max	4.63	3.19	2.09
Min	4.53	3.10	2.02



KEMET Ceramic Surface Mount Capacitors

High Voltage ($\geq 500\text{Vdc}$), ArcShield, Flexible Termination, X7R, $0.33\mu\text{F}$, 630 Vdc, 2220 Case Size
 Qualification per Q-200 Rev. D and Results Summary - Lot Id. 1059T105903FT

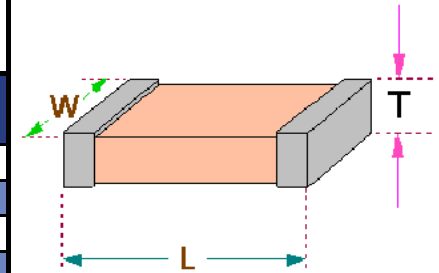
		Initial Readings			Post Test Readings		
		Capacitance, μF	DF, 120 Hz, %	IR, 25°C, MOhm	Delta Cap, %	DF, 120 Hz, %	IR, 25°C, MOhm
High Temperature Life	Limits	0.264 - 0.396	2.50	303.00	± 20	3.00	30.30
<i>125°C, 1.2x Rated Voltage, 1000 Hours</i>	AVG	0.338	1.18	20900.00	-6.721	1.14	13200.00
	STD	0.001	0.01	1.05	1.480	0.07	1.26
	Max	0.342	1.19	23400.00	-4.748	1.26	19800.00
	Min	0.335	1.15	15900.00	-9.456	1.05	7190.00
Storage Life	Limits	0.264 - 0.396	2.50	303.00	± 20	3.00	30.30
<i>125°C, 0 Volts, 1000 Hours</i>	AVG	0.340	1.02	10800.00	-4.218	1.29	13100.00
	STD	0.003	0.03	1.06	0.497	0.01	1.43
	Max	0.346	1.08	11800.00	-3.347	1.30	23600.00
	Min	0.334	0.96	7140.00	-5.270	1.27	8500.00
Load Humidity	Limits	0.264 - 0.396	2.50	303.00	± 20	3.00	30.30
<i>85°C, 85% RH, 200 Vdc max., 1000 Hours</i>	AVG	0.339	1.02	11000.00	1.066	1.06	5940.00
	STD	0.003	0.16	1.05	0.326	0.15	1.04
	Max	0.347	2.31	12300.00	1.520	2.36	6570.00
	Min	0.335	0.92	8690.00	0.238	0.99	4890.00
Low Volt Humidity	Limits	0.264 - 0.396	2.50	303.00	± 20	3.00	30.30
<i>85°C, 85% RH, 1.5 Volts, 1000 Hours</i>	AVG	0.341	1.03	12400.00	0.112	1.03	76400.00
	STD	0.003	0.05	1.03	0.315	0.06	5.40
	Max	0.349	1.14	13700.00	0.780	1.14	1260000.00
	Min	0.334	0.95	11500.00	-0.549	0.90	352.00
Temperature Cycle	Limits	0.264 - 0.396	2.50	303.00	n/a	2.50	303.00
<i>-55°C to +125°C, 1000 Cycles</i>	AVG	0.339	0.98	12100.00	-2.525	0.89	6220.00
	STD	0.003	0.03	1.22	0.199	0.04	1.04
	Max	0.346	1.06	16900.00	-2.179	1.13	6700.00
	Min	0.334	0.95	3230.00	-3.169	0.86	5690.00

KEMET Ceramic Surface Mount Capacitors

High Voltage (≥ 500Vdc), ArcShield, Flexible Termination, X7R, 0.33μF, 630 Vdc, 2220 Case Size
 Qualification per Q-200 Rev. D and Results Summary - Lot Id. 1059T105903FT

		Initial Readings			Post Test Readings		
		Capacitance, μF	DF, 120 Hz, %	IR, 25°C, MOhm	Delta Cap, %	DF, 120 Hz, %	IR, 25°C, MOhm
Resistance to Soldering Heat	Limits	0.264 - 0.396	2.50	303.00	n/a	2.50	303.00
<i>Test Condition D. Pre-heat condition of 150°C, 60-120sec is allowed for ceramic components</i>	AVG	0.325	0.83	17000.00	3.833	1.04	8460.00
	STD	0.001	0.05	1.51	0.414	0.03	1.17
	Max	0.328	0.97	34500.00	4.422	1.11	16800.00
	Min	0.324	0.82	9700.00	2.172	1.00	5620.00
Mechanical Shock / Vibration	Limits	0.264 - 0.396	2.50	303.00	n/a	2.50	303.00
<i>Method 213: Figure 1, Condition F. Method 204: 12 cycles of 5 g for 20 minutes</i>	AVG	0.336	1.12	14500.00	-0.907	1.10	9740.00
	STD	0.104	0.04	1.08	0.318	0.09	1.09
	Max	0.338	1.16	17700.00	-0.390	1.29	11900.00
	Min	0.333	1.01	12900.00	-1.581	1.01	8480.00

		Electrical Characterization			
		-55°C Delta Cap (%)	Reference Capacitance @ 25°C, μF	+125°C Delta Cap (%)	IR, 125°C MOhm
Temperature Coefficient Characterization (TCC)	Limits	± 15	0.264 - 0.396	± 15	30.30
<i>KEMET Custom Test: Parametrically test, show statistics at room, min, and max operating temperatures.</i>	AVG	-8.51	0.326	-10.46	8530.00
	STD	0.60	0.002	0.65	0.00
	Max	-7.14	0.329	-9.74	1260.00
	Min	-9.55	0.323	-13.05	593.00



Other Mechanical / Performance Results		
ESD, per AEC-Q200-002	Class	4
Beam Load, per AEC-Q200-003, MPascal, MPa	AVG	1960
	STD	200
	Max	2283
	Min	1593

Dimensions, mm			
	Length	Width	Thickness
Limits	5.15 - 6.65	4.60 - 5.40	2.30 - 2.70
AVG	5.85	4.94	2.53
STD	0.01	0.02	0.01
Max	5.86	4.98	2.54
Min	5.84	4.93	2.51

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