

Type DCMC 85 °C High Capacitance, Screw Terminal, Aluminum

Highest Capacitance Screw Terminal Type



With more capacitance and often more ripple-current capability than the best-value Type 3186 capacitor, the Type DCMC capacitor is the better choice for high-capacitance, power supply filters and energy storage applications such as welding equipment, UPS systems and computer hold-up power. The extended cathode foil of the DCMC assures cool operation with heatflow from the capacitor element to the can.

Highlights

- Highest capacitance value
- Right for Power Supply and UPS systems
- Thermal-Pak™ extended cathode construction

Specifications

Temperature Range	-40 °C to +85 °C							
Rated Voltage Range	6.3 Vdc to 550 Vdc							
Capacitance Range	110 µF to 2.7 F							
Capacitance Tolerance	-10% +75% ≤ 100 Vdc -10% +50% ≥ 160 Vdc							
Leakage Current	≤ 6 \sqrt{CV} µA, 6 mA max, at 5 min							
Ripple Current Multipliers	Ambient Temperature							
		45 °C	55 °C	65 °C	75 °C	85 °C		
		2.24	2.00	1.73	1.41	1.00		
		Frequency						
		50 Hz	60 Hz	120 Hz	360 Hz	1 kHz	5 kHz	10 kHz & up
	1 3/8" & 1 3/4" Diameters							
	6.3 to 160 V	0.92	0.94	1.00	1.05	1.10	1.10	1.12
	200 to 350 V	0.80	0.85	1.00	1.17	1.30	1.30	1.32
	400 to 550 V	0.78	0.83	1.00	1.20	1.35	1.36	1.40
	2" & 2 1/2" Diameters							
6.3 to 160 V	0.93	0.95	1.00	1.04	1.07	1.11	1.12	
200 to 350 V	0.81	0.87	1.00	1.13	1.20	1.24	1.26	
400 to 550 V	0.79	0.83	1.00	1.17	1.26	1.30	1.34	
3" & 3 1/2" Diameters								
6.3 to 160 V	0.95	0.96	1.00	1.02	1.04	1.05	1.05	
200 to 350 V	0.85	0.88	1.00	1.08	1.12	1.14	1.17	
400 to 550 V	0.82	0.84	1.00	1.13	1.20	1.24	1.27	
Low Temperature Characteristics	Impedance ratio: $Z_{-20^{\circ}\text{C}}/Z_{+25^{\circ}\text{C}}$ ≤ 20 (6.3–10 Vdc) ≤ 8 (16–50 Vdc) ≤ 4 (63–100 Vdc) ≤ 3 (150–550 Vdc)							
Endurance Life Test	2000 h @ full load at 85 °C Δ Capacitance ±20% ESR 200% of limit DCL 100% of limit							
Shelf Life Test	500 h @ 85 °C Capacitance 100% of limit ESR 100% of limit DCL 100% of limit							
Vibration	5 to 55 Hz, 0.06" and 10 g max, 1.5 h each of 2 axes							
RoHS Compliant								

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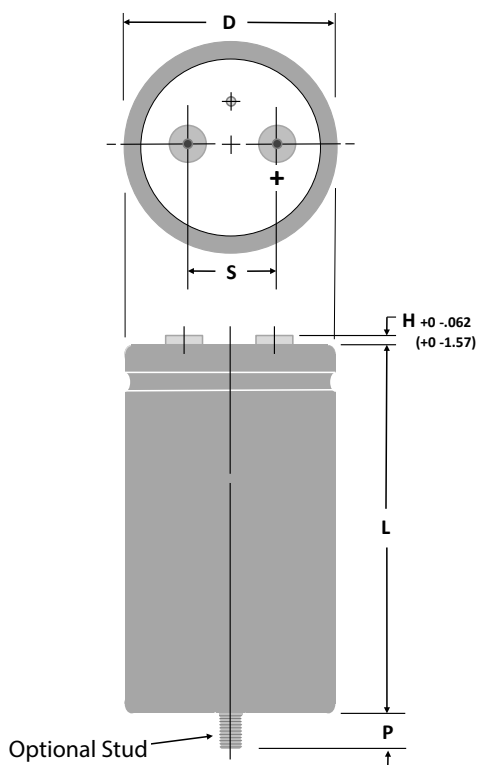
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Part Numbering System

DCMC	472	U	400	DC	2	B	S
Type	Capacitance	Tolerance	Voltage	Case Code	Insulation	Terminal	Can Style
100 = 10 μ F	101 = 100 μ F	M = $\pm 20\%$	6R3 = 6.3 Vdc	0 = None	1 = Polyester	A = Low Post	Blank = Standard Can
492 = 4900 μ F	433 = 43,000 μ F	U = $-10\%+75\%$	063 = 63 Vdc	2 = PVC	D = High Current, Low Post	E = High Current, High Post	S = Stud Bottom
		T = $-10\%+50\%$	400 = 400 Vdc			F or M = M5 Post	P = Stud with Thermal Pad
						G = M6 Low Post	
						H = M6 High Post	

Polyester insulation is not available for 3.5-inch diameter units.
Standard insulation is 0.008-in PVC sleeve with 0.01-in polypropylene end disk.

Outline Drawing



NOTE: With the stud-mount feature, a thermally-conductive disk can be inserted in the bottom flush with the outer insulating sleeve. This reduces the thermal resistance through the can bottom by 0.3 °C/W. Can Style P.

Stud Dimensions

Case Diam.	Stud Thread	P ± 0.039" (±1.0 mm)
1.375	M8	0.470" (12.0)
1.750	M8	0.470" (12.0)
2.000	M12	0.630" (16.0)
2.500	M12	0.630" (16.0)
3.000	M12	0.630" (16.0)
3.500	M12	0.630" (16.0)

Terminal Dimensions

Terminal Style	For Case Diameters	Code	Post Diameter		H max		Thread	min Full Thread		Torque	
			in	mm	in	mm		in	mm	in-lb	N-m
Low Post	1 3/8 to 3	A	0.314	8.0	0.094	2.4	10-32	0.218	5.5	25	2.82
High Post	1 3/8 to 3	B	0.314	8.0	0.281	7.1	10-32	0.375	9.5	25	2.82
High Current, Low	2 1/2 to 3 1/2	D	0.684	17.4	0.125	3.2	1/4-28	0.344	8.7	60	6.78
High Current, High	2 1/2 to 3 1/2	E	0.684	17.4	0.281	7.1	1/4-28	0.469	11.9	60	6.78
M5 Post, Small	1 3/8 to 2	M	0.314	8.0	0.281	7.1	M5	0.375	9.5	25	2.82
M5 Post	2 1/2 & 3	F	0.512	13.0	0.230	5.8	M5	0.344	8.7	25	2.82
M6 Low Post	2 1/2 to 3 1/2	G	0.684	17.4	0.125	3.2	M6	0.344	8.7	60	6.78
M6 High Post	2 1/2 to 3 1/2	H	0.684	17.4	0.281	7.1	M6	0.469	11.9	60	6.78

NOTE: Only high post and M5 post terminals are available at 550 Vdc as they meet the required creepage distance.

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Uninsulated Case Dimensions

For insulated case, add 0.024"(0.610 mm) to "D" and 0.030"(0.762 mm) to height.

Case Code	Diam. (D)		Length (L)		Terminals (S)		Typical Weight	
	±.031 Inches	±.78 mm	±.062 Inches	±1.57 mm	±0.015 Inches	±.38 mm	oz	g
AK	1.375	34.93	1.625	41.28	0.50	12.70	1.9	54
AA	1.375	34.93	2.125	53.98	0.50	12.70	2.0	57
AH	1.375	34.93	2.625	66.68	0.50	12.70	2.7	77
AB	1.375	34.93	3.125	79.38	0.50	12.70	3.3	94
AJ	1.375	34.93	3.625	92.08	0.50	12.70	3.8	108
AC	1.375	34.93	4.125	104.78	0.50	12.70	4.4	125
AD	1.375	34.93	4.625	117.48	0.50	12.70	5.1	145
AE	1.375	34.93	5.125	130.18	0.50	12.70	6.8	193
AF	1.375	34.93	5.625	142.88	0.50	12.70	8.1	230
EA	1.750	44.45	2.125	53.98	0.75	19.05	2.7	76
EH	1.750	44.45	2.625	66.68	0.75	19.05	3.8	108
EB	1.750	44.45	3.125	79.38	0.75	19.05	5.1	145
EJ	1.750	44.45	3.625	92.08	0.75	19.05	6.8	193
EC	1.750	44.45	4.125	104.78	0.75	19.05	8.1	230
ED	1.750	44.45	4.625	117.48	0.75	19.05	9.0	255
EE	1.750	44.45	5.125	130.18	0.75	19.05	9.5	269
EF	1.750	44.45	5.625	142.88	0.75	19.05	10.5	298
BA	2.000	50.80	2.125	53.98	0.88	22.23	5.4	153
BH	2.000	50.80	2.625	66.68	0.88	22.23	6.1	173
BB	2.000	50.80	3.125	79.38	0.88	22.23	6.8	193
BJ	2.000	50.80	3.625	92.08	0.88	22.23	8.2	232
BC	2.000	50.80	4.125	104.78	0.88	22.23	9.5	269
BD	2.000	50.80	4.625	117.48	0.88	22.23	10.3	292
BE	2.000	50.80	5.125	130.18	0.88	22.23	10.7	303
BF	2.000	50.80	5.625	142.88	0.88	22.23	13.0	369
CH	2.500	63.50	2.625	66.68	1.13	28.58	9.2	261
CB	2.500	63.50	3.125	79.38	1.13	28.58	10.4	295
CJ	2.500	63.50	3.625	92.08	1.13	28.58	12.7	361
CC	2.500	63.50	4.125	104.78	1.13	28.58	15.0	425
CD	2.500	63.50	4.625	117.48	1.13	28.58	17.2	488
CE	2.500	63.50	5.125	130.18	1.13	28.58	19.3	547
CF	2.500	63.50	5.625	142.88	1.13	28.58	21.4	607
DB	3.000	76.20	3.125	79.38	1.25	31.75	16.7	473
DJ	3.000	76.20	3.625	92.08	1.25	31.75	20.0	567
DC	3.000	76.20	4.125	104.78	1.25	31.75	22.2	629
DD	3.000	76.20	4.625	117.48	1.25	31.75	25.5	723
DE	3.000	76.20	5.125	130.18	1.25	31.75	30.0	850
DF	3.000	76.20	5.625	142.88	1.25	31.75	31.9	904
DP	3.000	76.20	5.875	149.23	1.25	31.75	32.8	931
DN	3.000	76.20	7.625	193.68	1.25	31.75	39.5	1119
DG	3.000	76.20	8.625	219.08	1.25	31.75	43.3	1227
FC	3.500	88.90	4.125	104.78	1.25	31.75	30.0	850
FD	3.500	88.90	4.625	117.48	1.25	31.75	34.4	976
FE	3.500	88.90	5.125	130.18	1.25	31.75	40.5	1148
FF	3.500	88.90	5.625	142.88	1.25	31.75	43.1	1221
FP	3.500	88.90	5.875	149.23	1.25	31.75	44.3	1257
FN	3.500	88.90	7.625	193.68	1.25	31.75	53.3	1512
FG	3.500	88.90	8.625	219.08	1.25	31.75	58.5	1658

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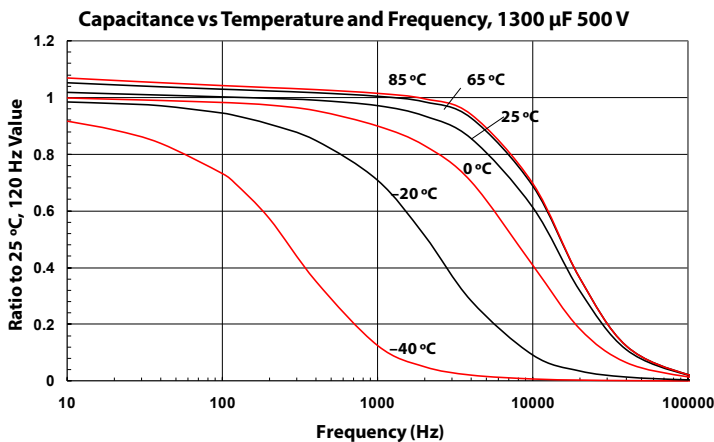
Cap. (µF)	Catalog Part Number	ESR Max. @ 25 °C 120 Hz (mΩ)	Ripple Max. @ 85°C 120 Hz (A)	Nominal Size D x L (inches)
3900	DCMC392T450DC2B	40.1	10.1	3 x 4 1/8
4100	DCMC412T450DD2B	37.5	10.8	3 x 4 5/8
4700	DCMC472T450DE2B	32.5	12.0	3 x 5 1/8
5000	DCMC502T450FC2D	31.8	12.5	3 1/2 x 4 1/8
5600	DCMC562T450DF2B	28.8	13.3	3 x 5 5/8
5800	DCMC582T450DP2B	27.3	15.4	3 x 5 7/8
5800	DCMC582T450FD2D	27.0	13.5	3 1/2 x 4 5/8
6800	DCMC682T450FE2D	23.5	15.0	3 1/2 x 5 1/8
7300	DCMC732T450FF2D	21.1	16.3	3 1/2 x 5 5/8
7700	DCMC772T450FP2D	20.0	17.2	3 1/2 x 5 7/8
7900	DCMC792T450DN2B	21.3	17.1	3 x 7 5/8
9000	DCMC902T450DG2B	17.6	18.6	3 x 8 5/8
10000	DCMC103T450FN2D	15.9	21.6	3 1/2 x 7 5/8
12000	DCMC123T450FG2D	13.3	24.0	3 1/2 x 8 5/8
500 Vdc (550 Vdc Surge)				
110	DCMC111T500AK2B	1224.3	0.8	1 3/8 x 1 5/8
180	DCMC181T500AA2B	736.9	1.2	1 3/8 x 2 1/8
240	DCMC241T500AH2B	556.5	1.4	1 3/8 x 2 5/8
270	DCMC271T500EA2B	498.4	1.6	1 3/4 x 2 1/8
320	DCMC321T500AB2B	409.7	1.9	1 3/8 x 3 1/8
340	DCMC341T500BA2B	393.1	2.0	2 x 2 1/8
380	DCMC381T500EH2B	347.2	2.2	1 3/4 x 2 5/8
400	DCMC401T500AJ2B	338.1	2.4	1 3/8 x 3 5/8
470	DCMC471T500BH2B	273.9	2.7	2 x 2 5/8
480	DCMC481T500AC2B	293.2	2.1	1 3/8 x 4 1/8
500	DCMC501T500EB2B	264.5	2.4	1 3/4 x 3 1/8
560	DCMC561T500AD2B	261.2	2.6	1 3/8 x 4 5/8
640	DCMC641T500AE2B	231.1	2.9	1 3/8 x 5 1/8
650	DCMC651T500EJ2B	202.0	3.2	1 3/4 x 3 5/8
700	DCMC701T500BB2B	200.1	3.4	2 x 3 1/8
720	DCMC721T500AF2B	195.4	3.6	1 3/8 x 5 5/8
790	DCMC791T500EC2B	172.4	3.9	1 3/4 x 4 1/8
800	DCMC801T500CH2B	170.6	3.0	2 1/2 x 2 5/8
860	DCMC861T500BJ2B	159.1	3.4	2 x 3 5/8
930	DCMC931T500ED2B	149.1	3.7	1 3/4 x 4 5/8
1000	DCMC102T500BC2B	138.7	4.1	2 x 4 1/8
1100	DCMC112T500EE2B	129.6	4.4	1 3/4 x 5 1/8

Cap. (µF)	Catalog Part Number	ESR Max. @ 25 °C 120 Hz (mΩ)	Ripple Max. @ 85°C 120 Hz (A)	Nominal Size D x L (inches)
1100	DCMC112T500CB2B	122.0	4.7	2 1/2 x 3 1/8
1200	DCMC122T500EF2B	114.7	5.0	1 3/4 x 5 5/8
1200	DCMC122T500BD2B	117.7	5.1	2 x 4 5/8
1400	DCMC142T500BE2B	102.3	4.8	2 x 5 1/8
1400	DCMC142T500CJ2B	95.1	5.3	2 1/2 x 3 5/8
1500	DCMC152T500BF2B	93.3	5.7	2 x 5 5/8
1700	DCMC172T500CC2B	79.7	6.4	2 1/2 x 4 1/8
1700	DCMC172T500DB2B	86.4	6.4	3 x 3 1/8
2100	DCMC212T500CE2B	61.1	7.8	2 1/2 x 5 1/8
2200	DCMC222T500CD2B	68.3	7.6	2 1/2 x 4 5/8
2200	DCMC222T500DJ2B	67.4	7.1	3 x 3 5/8
2500	DCMC252T500CF2B	54.7	8.3	2 1/2 x 5 5/8
2500	DCMC252T500DC2B	55.4	8.6	3 x 4 1/8
3000	DCMC302T500DD2B	48.1	9.5	3 x 4 5/8
3400	DCMC342T500DE2B	43.1	10.4	3 x 5 1/8
3500	DCMC352T500FC2D	40.1	11.1	3 1/2 x 4 1/8
3900	DCMC392T500DF2B	37.5	11.6	3 x 5 5/8
4100	DCMC412T500DP2B	35.5	13.5	3 x 5 7/8
4100	DCMC412T500FD2D	34.1	12.0	3 1/2 x 4 5/8
4800	DCMC482T500FE2D	30.0	13.2	3 1/2 x 5 1/8
5400	DCMC542T500FF2D	28.0	14.2	3 1/2 x 5 5/8
5700	DCMC572T500FP2D	26.0	15.1	3 1/2 x 5 7/8
5700	DCMC572T500DN2B	27.9	15.0	3 x 7 5/8
6600	DCMC662T500DG2B	23.1	16.2	3 x 8 5/8
7900	DCMC792T500FN2D	20.5	19.1	3 1/2 x 7 5/8
9200	DCMC922T500FG2D	16.7	21.4	3 1/2 x 8 5/8
550 Vdc (600 Vdc Surge)				
1400	DCMC142T550CC2B	170.5	4.9	2 1/2 x 4 1/8
1700	DCMC172T550CD2B	132.6	5.9	2 1/2 x 4 5/8
1900	DCMC192T550CE2B	111.7	6.8	2 1/2 x 5 1/8
2200	DCMC222T550DC2B	90.4	7.8	3 x 4 1/8
2300	DCMC232T550CF2B	86.5	7.8	2 1/2 x 5 5/8
2500	DCMC252T550DD2B	79.6	8.4	3 x 4 5/8
2900	DCMC292T550DE2B	64.0	9.7	3 x 5 1/8
3400	DCMC342T550DF2B	54.6	10.9	3 x 5 5/8
3700	DCMC372T550DP2B	50.2	12.2	3 x 5 7/8
5100	DCMC512T550DN2B	36.4	16.2	3 x 7 5/8

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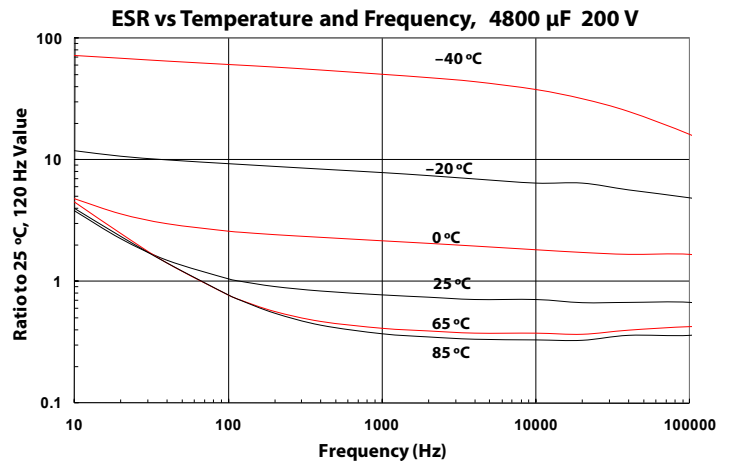
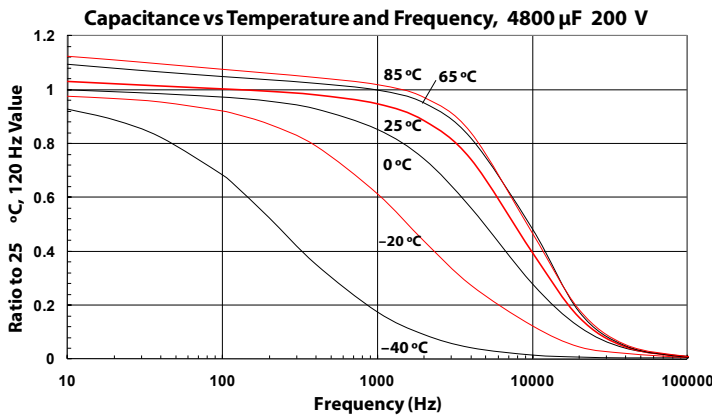
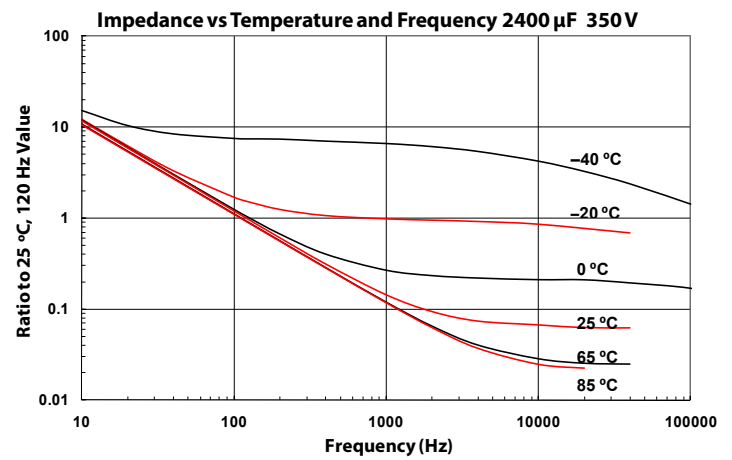
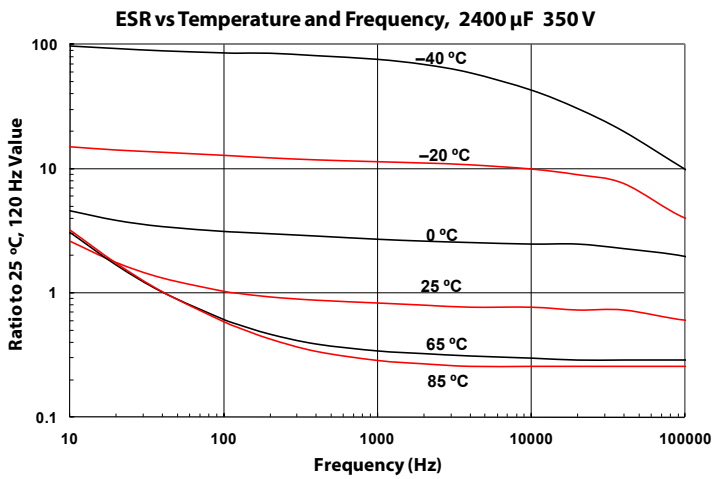
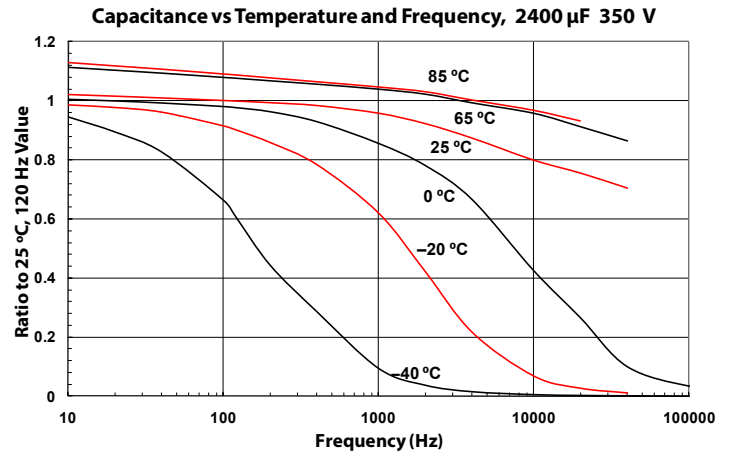
Typical Performance Curves



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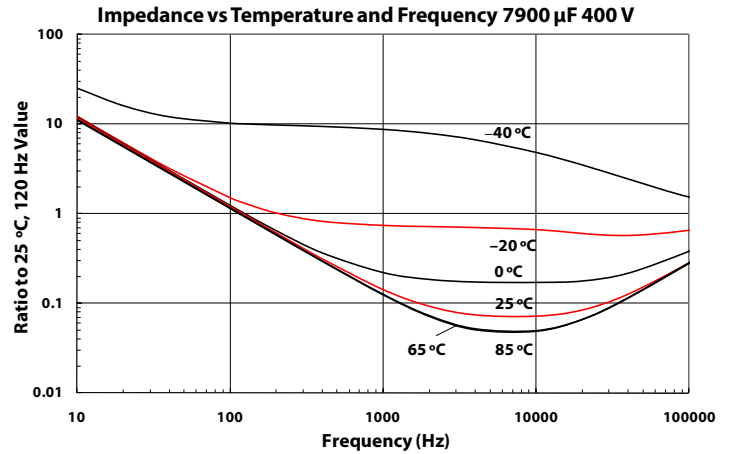
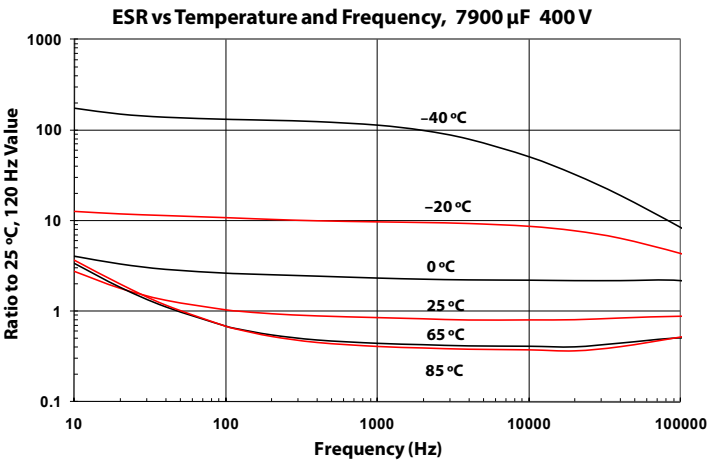
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