

Type DCMC 85 °C High Capacitance, Computer Grade, Aluminum

-40 °C to +85 °C, High Capacitance



Highest Capacitance Screw Terminal Type

With more capacitance and ripple-current capability than the best-value Type 3186 capacitor, the Type DCMC capacitor is often 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

Operating Temperature:	-40 °C to +85 °C
Rated Voltage:	6.3 to 550 Vdc
Capacitance:	110 µF to 2.7 F
Capacitance Tolerance:	-10% +75% up to 100 Vdc, -10 + 50% 160 Vdc & up
DC Leakage Current:	≤6√CV µA (6 mA max.) at 5 minutes
Cold Impedence:	-20 °C multiple of 25 °C Z ≤ 20 for 6.3–10V, 8 for 16–50V, 4 for 63–100V, 3 for 150V and up.

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

EIA Ripple Life: 2,000 h at full load @ +85 °C per EIA IS-749

ΔCapacitance ±20%

ESR 200% of limit

DCL 100% of limit

Life Test: 4,000 h at 85 °C and rated voltage

ΔCapacitance ±20%

ESR 200% of limit

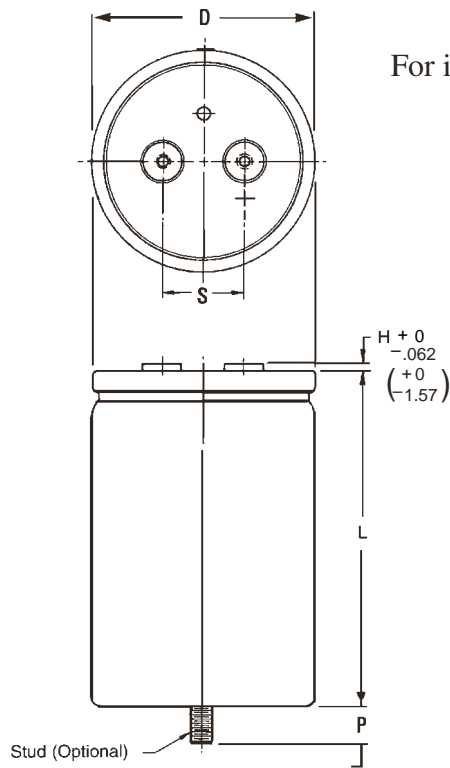
DCL 100% of limit

Shelf Life: 500 h @ 85 °C, capacitance, ESR and DCL, initial requirements.

Vibration: 10 to 55 Hz, 0.06" and 10g max, 1.5 h ea. of 2 axis

Type DCMC 85 °C High Capacitance, Computer Grade, Aluminum

Outline Drawing



Case Dimensions

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	
	±0.031 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

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. Order 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	Code	Post Diameter inches (mm)	H max inches (mm)	Thread	For Case Diameters
Low Post	A	0.314" (8.0)	0.094" (2.39)	10-32	13/8 to 3
High Post	B	0.314" (8.0)	0.281" (7.14)	10-32	13/8 to 3
High Current, Low Post	D	0.687" (17.5)	0.125" (3.18)	1/4-28	2 1/2 to 3 1/2
High Current, High Post	E	0.687" (17.5)	0.281" (7.14)	1/4-28	2 1/2 to 3 1/2
M5 post, small	M	0.314" (8.00)	0.281" (7.14)	M5	13/8 to 2
M5 Post	F	0.512" (13.0)	0.230" (5.84)	M5	2 1/2 & 3
M6 Low Post	G	0.687" (17.5)	0.125" (3.18)	M6	2 1/2 to 3 1/2
M6 High Post	H	0.687" (17.5)	0.281" (7.14)	M6	2 1/2 to 3 1/2

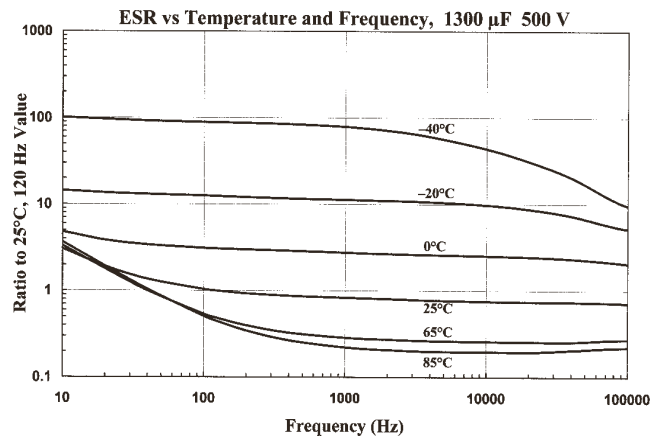
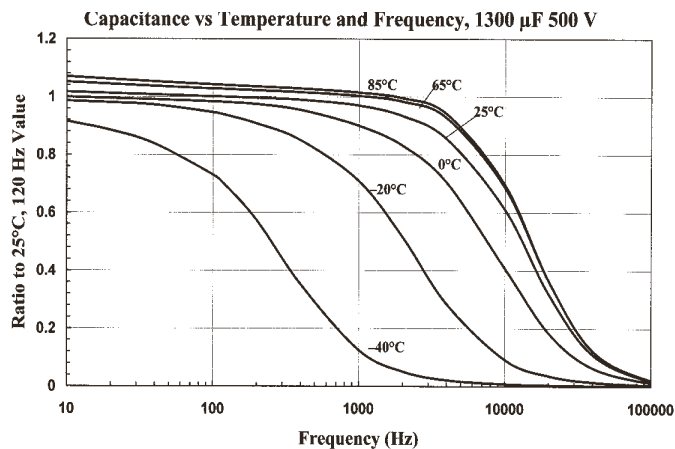
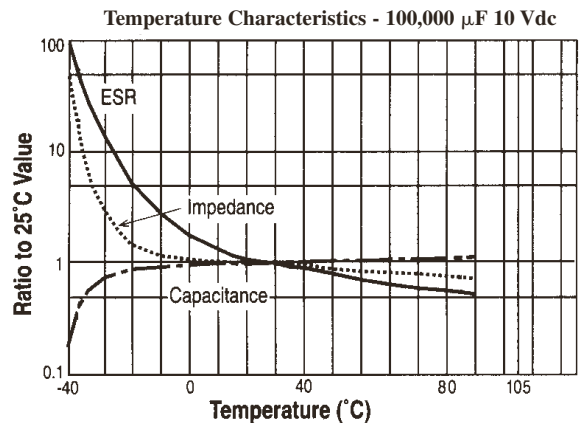
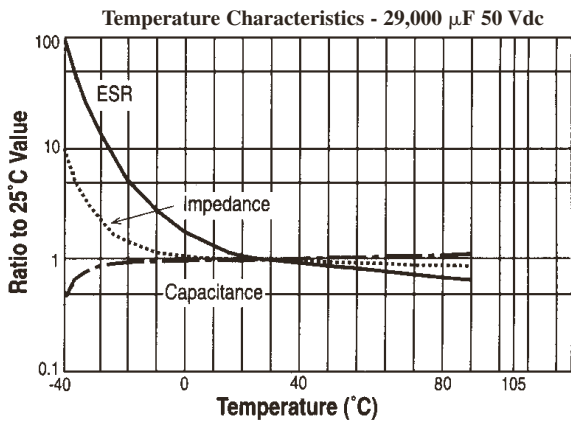
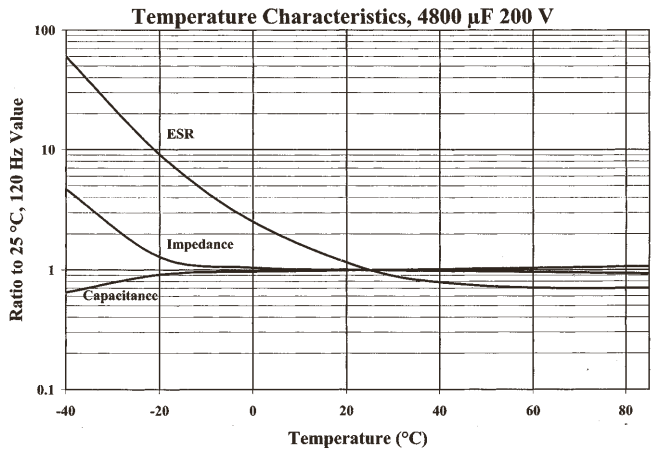
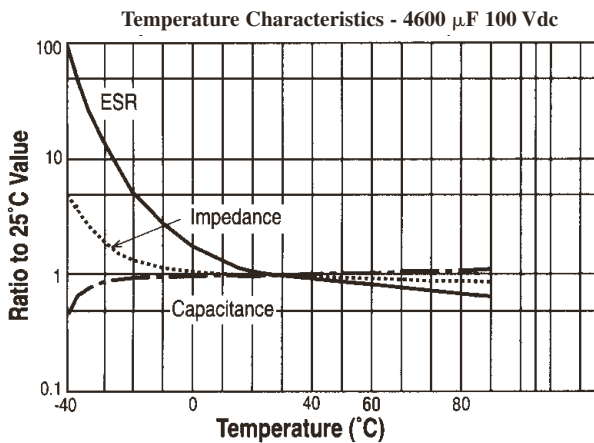
NOTE: Only high post and M5 post terminals are available at 550 Vdc as they meet the required creepage distance.

Type DCMC 85 °C High Capacitance, Computer Grade, Aluminum Part Numbering System

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

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.

Typical Performance Curves



Type DCMC 85 °C High Capacitance, Computer Grade, Aluminum

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)	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)
45000	DCMC453T160DP2B	6.2	28.1	3 x 5 7/8	25000	DCMC253T200FD2B	15.3	20.5	3 1/2 x 4 5/8
51000	DCMC513T160FE2D	6.9	27.5	3 1/2 x 5 1/8	26000	DCMC263T200DP2B	12.7	19.7	3 x 5 7/8
58000	DCMC583T160FF2D	6.2	30.0	3 1/2 x 5 5/8	28000	DCMC283T200FE2B	13.4	19.8	3 1/2 x 5 1/8
61000	DCMC613T160FP2D	5.9	31.6	3 1/2 x 5 7/8	31000	DCMC313T200FF2B	12.0	21.6	3 1/2 x 5 5/8
62000	DCMC623T160DN2D	5.1	34.9	3 x 7 5/8	33000	DCMC333T200DN2B	10.8	23.7	3 x 7 5/8
72000	DCMC723T160DG2D	4.3	37.5	3 x 8 5/8	33000	DCMC333T200FP2D	11.5	22.7	3 1/2 x 5 7/8
85000	DCMC853T160FN2D	4.9	38.8	3 1/2 x 7 5/8	37000	DCMC373T200DG2B	9.6	25.2	3 x 8 5/8
99000	DCMC993T160FG2D	4.2	42.8	3 1/2 x 8 5/8	44000	DCMC443T200FN2D	9.3	28.2	3 1/2 x 7 5/8
200 Vdc (250 Vdc Surge)					250 Vdc (300 Vdc Surge)				
680	DCMC681T200AK2B	205.8	2.0	1 3/8 x 1 5/8	470	DCMC471T250AK2B	259.7	1.8	1 3/8 x 1 5/8
1000	DCMC102T200AA2B	140.3	2.6	1 3/8 x 2 1/8	820	DCMC821T250AA2B	156.4	2.5	1 3/8 x 2 1/8
1500	DCMC152T200AH2B	100.5	3.4	1 3/8 x 2 5/8	1200	DCMC122T250AH2B	118.7	3.1	1 3/8 x 2 5/8
1800	DCMC182T200AB2B	78.5	4.1	1 3/8 x 3 1/8	1400	DCMC142T250EA2B	99.0	3.6	1 3/4 x 2 1/8
1900	DCMC192T200EA2B	79.1	4.3	1 3/4 x 2 1/8	1500	DCMC152T250AB2B	88.0	4.1	1 3/8 x 3 1/8
2200	DCMC222T200AJ2B	63.9	5.0	1 3/8 x 3 5/8	1800	DCMC182T250EH2B	83.3	4.4	1 3/4 x 2 5/8
2400	DCMC242T200EH2B	62.5	5.3	1 3/4 x 2 5/8	1800	DCMC182T250BA2B	94.7	4.3	2 x 2 1/8
2500	DCMC252T200BA2B	82.0	4.8	2 x 2 1/8	1900	DCMC192T250AJ2B	69.5	5.2	1 3/8 x 3 5/8
2700	DCMC272T200AC2B	51.7	6.2	1 3/8 x 4 1/8	2300	DCMC232T250AC2B	57.9	5.9	1 3/8 x 4 1/8
3100	DCMC312T200EB2B	48.4	5.2	1 3/4 x 3 1/8	2300	DCMC232T250EB2B	61.3	4.6	1 3/4 x 3 1/8
3300	DCMC332T200AD2B	43.2	6.0	1 3/8 x 4 5/8	2400	DCMC242T250AD2B	51.4	5.5	1 3/8 x 4 5/8
3300	DCMC332T200BH2B	61.0	5.3	2 x 2 5/8	2500	DCMC252T250BH2B	65.7	5.2	2 x 2 5/8
3800	DCMC382T200EJ2B	37.9	7.2	1 3/4 x 3 5/8	2700	DCMC272T250AE2B	44.0	6.6	1 3/8 x 5 1/8
3900	DCMC392T200AE2B	37.8	7.5	1 3/8 x 5 1/8	3000	DCMC302T250EJ2B	48.7	6.6	1 3/4 x 3 5/8
4300	DCMC432T200BB2B	46.1	7.1	2 x 3 1/8	3300	DCMC332T250BB2B	46.2	7.1	2 x 3 1/8
4500	DCMC452T200AF2B	33.4	8.6	1 3/8 x 5 5/8	3400	DCMC342T250AF2B	38.3	8.0	1 3/8 x 5 5/8
4600	DCMC462T200EC2B	31.3	9.2	1 3/4 x 4 1/8	3700	DCMC372T250EC2B	40.5	8.1	1 3/4 x 4 1/8
5400	DCMC542T200ED2B	26.8	7.7	1 3/4 x 4 5/8	3900	DCMC392T250ED2B	34.8	6.7	1 3/4 x 4 5/8
5500	DCMC552T200CH2B	42.2	6.6	2 1/2 x 2 5/8	3900	DCMC392T250BJ2B	38.2	6.9	2 x 3 5/8
5600	DCMC562T200BJ2B	36.2	7.5	2 x 3 5/8	4100	DCMC412T250CH2B	51.8	6.3	2 1/2 x 2 5/8
6100	DCMC612T200EE2B	23.5	9.9	1 3/4 x 5 1/8	4500	DCMC452T250EE2B	30.6	8.6	1 3/4 x 5 1/8
6900	DCMC692T200EF2B	21.0	10.9	1 3/4 x 5 5/8	4700	DCMC472T250BC2B	31.5	8.9	2 x 4 1/8
6900	DCMC692T200BC2B	28.5	9.7	2 x 4 1/8	5000	DCMC502T250EF2B	27.3	9.9	1 3/4 x 5 5/8
7100	DCMC712T200CB2B	31.2	9.6	2 1/2 x 3 1/8	5200	DCMC522T250CB2B	32.1	9.5	2 1/2 x 3 1/8
8200	DCMC822T200BD2B	24.4	11.2	2 x 4 5/8	5600	DCMC562T250BD2B	26.9	10.7	2 x 4 5/8
9100	DCMC912T200BE2B	21.7	10.5	2 x 5 1/8	6200	DCMC622T250BE2B	23.6	10.1	2 x 5 1/8
10000	DCMC103T200BF2B	19.6	11.7	2 x 5 5/8	6400	DCMC642T250CJ2B	25.1	10.4	2 1/2 x 3 5/8
10000	DCMC103T200CJ2B	22.3	11.6	2 1/2 x 3 5/8	6800	DCMC682T250BF2B	21.2	11.9	2 x 5 5/8
11000	DCMC113T200CC2B	20.3	12.7	2 1/2 x 4 1/8	7800	DCMC782T250DB2B	27.6	10.9	3 x 3 1/8
11000	DCMC113T200DB2B	30.3	10.8	3 x 3 1/8	8200	DCMC822T250CC2B	20.8	13.0	2 1/2 x 4 1/8
12000	DCMC123T200CD2B	17.3	14.7	2 1/2 x 4 5/8	10000	DCMC103T250CD2B	17.8	14.5	2 1/2 x 4 5/8
13000	DCMC133T200CE2B	15.8	15.9	2 1/2 x 5 1/8	10000	DCMC103T250DJ2B	21.6	13.6	3 x 3 5/8
13000	DCMC133T200DJ2B	23.7	12.0	3 x 3 5/8	11000	DCMC113T250CE2B	15.5	14.8	2 1/2 x 5 1/8
15000	DCMC153T200CF2B	13.7	16.5	2 1/2 x 5 5/8	12000	DCMC123T250CF2B	13.8	16.5	2 1/2 x 5 5/8
15000	DCMC153T200DC2B	19.7	14.3	3 x 4 1/8	12000	DCMC123T250DC2B	17.6	15.2	3 x 4 1/8
18000	DCMC183T200DD2B	16.9	16.1	3 x 4 5/8	13000	DCMC133T250DD2B	16.3	16.4	3 x 4 5/8
21000	DCMC213T200FC2B	17.1	16.5	3 1/2 x 4 1/8	15000	DCMC153T250DE2B	14.3	18.0	3 x 5 1/8
22000	DCMC223T200DE2B	14.8	18.2	3 x 5 1/8	16000	DCMC163T250FC2D	19.5	15.9	3 1/2 x 4 1/8
24000	DCMC243T200DF2B	13.3	19.5	3 x 5 5/8					