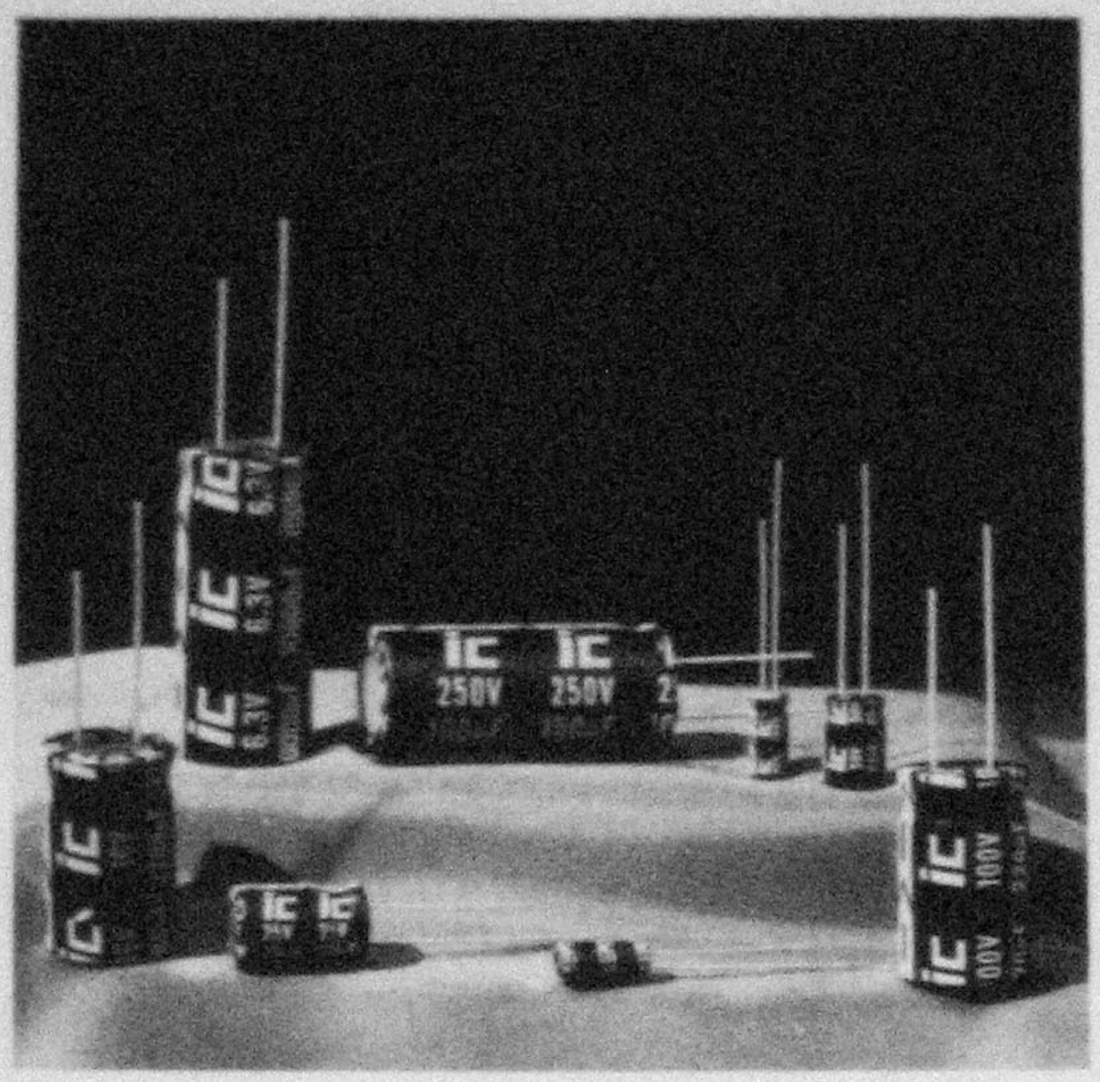
ALUMINUM ELECTROLYTIC CAPACITORS
+105°C Subminiature

RMR



SPECIFICATIONS:

Capacitance Range:
0.47 Mfd. to 10,000 Mfd.

Voltage Range:
6.3 WVDC to 250 WVDC

Capacitance Tolerance:
±20% (M) Standard
±10% (K) Optional

Leakage Current:
≤0.002CV or 2μA min.

Operating Temperature:
−40° C to +105° C

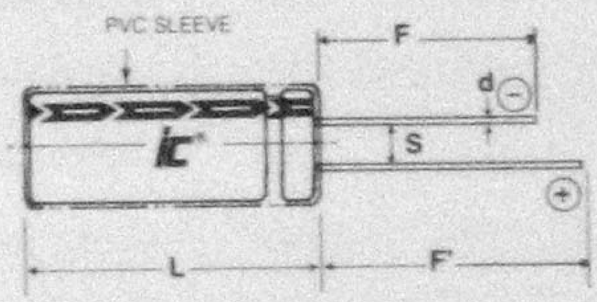
Storage Temperature:
−55° C to +105° C

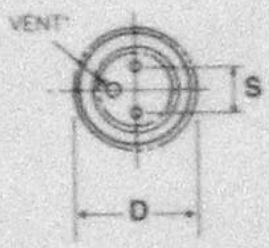
FEATURES:

Type RMR provides the highest capacitance volume density available in a quality, top performance radial lead aluminum electrolytic. Featuring a +105° C electrolyte and high gain etched foil, type RMR provides the designer with excellent specifications that offer substantial reserves for long life designs. When derated below +105° C, operating life may surpass most components in the circuit. Small size, low leakage, and high temperature stability make RMR the cost effective choice for top quality designs and replacements.

SPECIAL ORDER OPTIONS

- Epoxy End Seal (RMR-PX)
- Tape & Reel
- Tape—Ammo (flat) pack
- MYLAR Sleeve
- Cut Leads
- Special Tolerances: ±10% (K)
- Solvent Tolerant End Seal





The source for Quality, Performance and Delivery

ILLINOIS CAPACITOR, INC.
3757 West Touhy Avenue, Lincolnwood, Illinois 60645 • (312) 675-1760 • Telex: 72-4361

ELECTRICAL SPECIFICATIONS

1.0 GENERAL PARAMETERS

Capacitance Range:	0.47 Mfd. to 10,000 Mfd
Voltage Range:	6.3 WVDC to 250 WVDC
Operating Temperature (Rated Voltage)	– 40 °C to + 105 °C
Storage Temperature:	–55°C to + 105°C

2.0 CAPACITANCE TOLERANCE (120Hz, +25°C)

Capacity	Tolerance
All Values	± 20% Standard (M)
All Values	± 10% Optional (K)

Other tolerances are available on special order

STANDARD TEST PROCEDURE

TEST METHOD: Capacitance, Dissipation Factor (DF), ESR and Impedance (Z) shall be measured using the bridge method under the following test conditions.

Temperature: +25°C (+0,–5°C)
Frequency: 120 Hz (+ 10, – 5 Hz)
Bias: Zero
Test Voltage: ≤0.5VRMS

3.0 DISSIPATION FACTOR DF (TAN δ) + 25°C, 120 Hz

MFD \ WV(SV)	6.3(8)	10(13)	16(20)	25(32)	35(44)	50(63)	63(79)	80(100)	100(125)	160(200)	250(300)
.47	→	→	→	→	→	.10	→	→	.08		
.68	→	→	→	→	→	.10	→	→	.08		
1.0	→	→	→	→	→	.10	→	→	.08		
1.5	→	→	→	→	→	.10	→	→	.08		
2.2	→	→	→	→	→	.10	→	→	.08	→	.12
3.3	→	→	→	→	.12	.10	→	→	.08	.12	.12
4.7	→	→	→	→	.12	.10	.10	→	.08	.12	.12
6.8	→	→	→	→	→	.10	.10	→	.08	.12	.12
10	→	→	.17	.15	.12	.10	.10	→	.08	.12	.12
15	→	→	→	.15	.12	.10	.10	.10	.08	.12	.12
22	→	.20	.17	.15	.12	.10	.10	→	.08	.12	.12
33	→	→	.17	.15	.12	.10	.10	.10	.08	.12	.12
47	→	.20	.17	.15	.12	.10	.10	.10	.08	.12	.12
68	→	.20	.17	.15	.12	.10	.10	.10	.08	.12	.12
100	→	.20	.17	.15	.12	.10	.10	.10	.08	.12	.12
150	→	.20	.17	.15	.12	.10	.10	.10	.08		
220	.24	.20	.17	.15	.12	.10	.10	.10	.08		
330	.24	.20	.17	.15	.12	.10	.10	.10	.08		
470	.24	.20	.17	.15	.12	.10	.10	.10	.08		
680	.24	.20	.17	.15	.12	.10	.10	.10			
1,000	.24	.20	.17	.15	.12	.10	.10				
1,500	.26	.22	.19	.17	.14	.12					
2,200	.28	.24	.21	.19	.16						
3,300	.30	.26	.23	.21							
4,700	.32	.28	.25								
6,800	.36	.32									
10,000	.44										

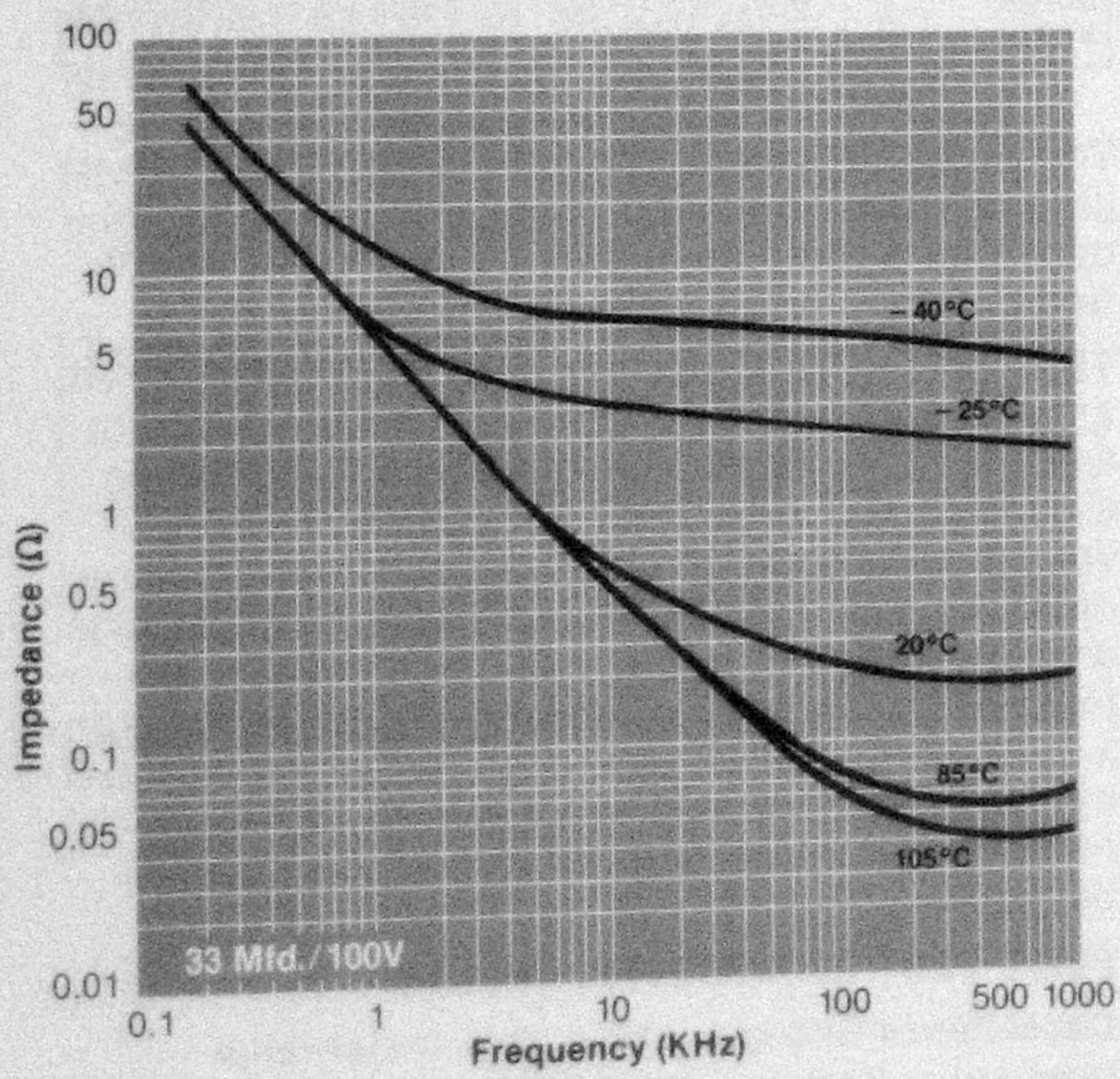
4.0 E.S.R. MAXIMUM EQUIVALENT SERIES RESISTANCE (Ω)

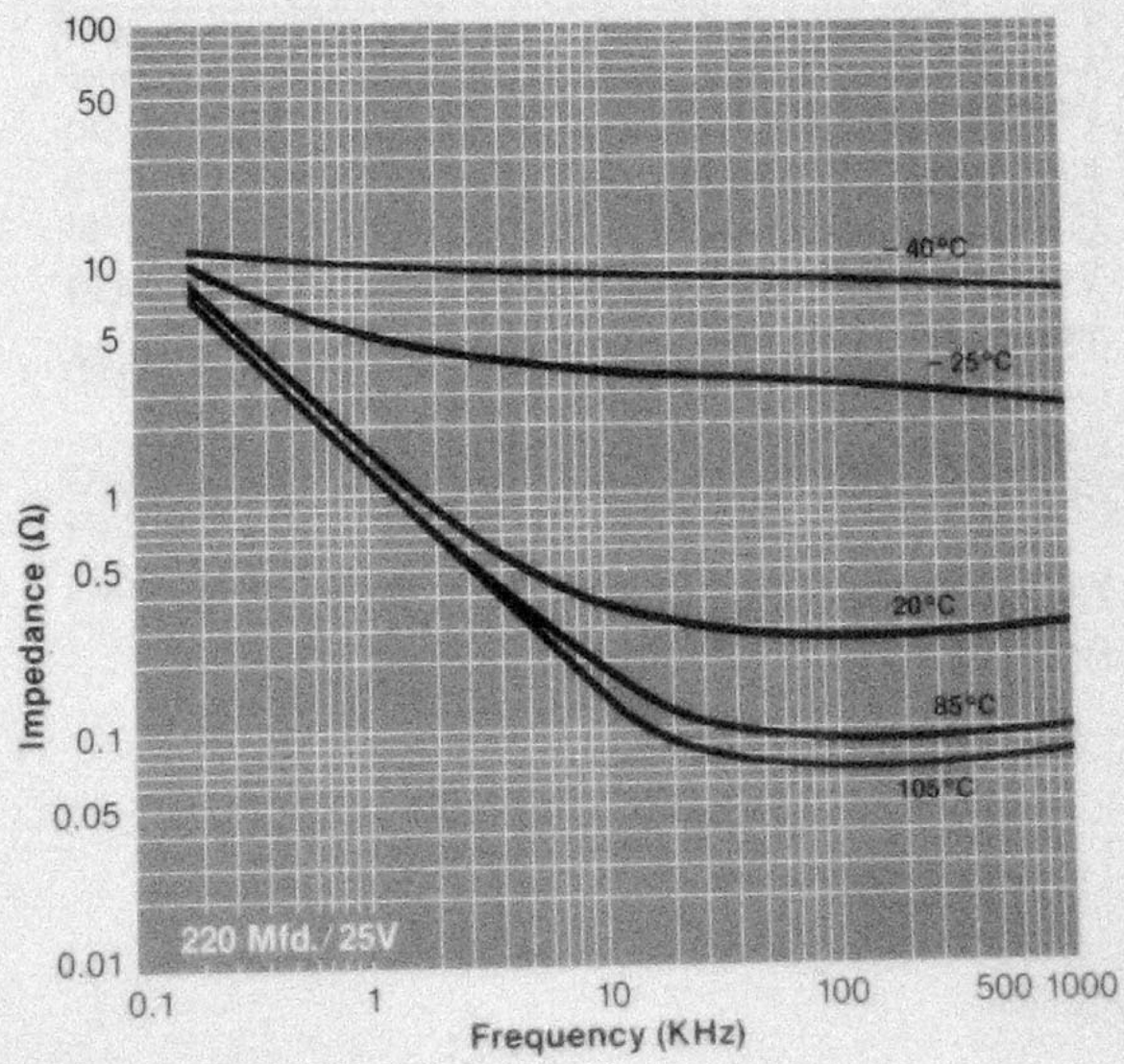
(+25°, 120 Hz) Nominal Capacitance, Maximum Dissipation Factor

MFD \ WV(SV)	6.3(8)	10(13)	16(20)	25(32)	35(44)	50(63)	63(79)	80(100)	100(125)	160(200)	250(300)
.47											
.68						282.34			225.87		
1.0						195.14			156.12		
1.5						132.70			106.16		
2.2						88.46			70.77		
3.3						60.31			48.28		72.42
4.7					48.25	40.21			32.18	48.25	48.25
6.8					33.88	28.23	28.23		22.59	33.88	33.88
10			22.55	19.90	15.92	19.52	19.52		15.61	23.42	23.42
15				13.27	10.62	13.27	13.27		10.62	15.92	15.92
22		12.06	10.25	9.05	7.24	8.84	8.84	8.84	7.08	10.62	10.62
33			6.83	6.03	4.83	6.03	6.03		4.83	7.24	7.24
47		5.64	4.79	4.23	3.39	4.02	4.02	4.02	3.22	4.83	4.83
68		3.90	3.31	2.93	2.34	2.82	2.82	2.28	2.26	3.39	3.39
100		2.65	2.25	1.99	1.59	1.95	1.95	1.95	1.56	2.34	2.34
150		1.76	1.50	1.33	1.06	1.32	1.32	1.32	1.06	1.59	1.59
220	1.45	1.20	1.02	.91	.72	.88	.88	.88	.71		
330	.97	.80	.68	.61	.48	.60	.60	.60	.48		
470	.68	.56	.47	.43	.34	.40	.40	.40	.32		
680	.47	.39	.33	.29	.23	.28	.28	.28	.23		
1,000	.32	.26	.22	.20	.16	.20	.20	.20			
1,500	.23	.19	.17	.15	.12	.13	.13				
2,200	.17	.14	.13	.12	.10	.11					
3,300	.12	.11	.09	.08							
4,700	.09	.08	.07								
6,800	.07	.06									
10,000	.06										

Equivalent Series Resistance is measured in ohms (Ω).

5.0 IMPEDANCE (Z) vs. FREQUENCY





Note: These graphs reflect typical measurements.

6.0 LEAKAGE CURRENT Maximum uA (+ 25°C, Rated Voltage @ 5 minutes)

MFD \ WV(SV)	6.3(8)	10(13)	16(20)	25(32)	35(44)	50(63)	63(79)	80(100)	100(125)	160(200)	250(300)
0.47	→	→	→	→	→	2	→	→	2		
0.68	→	→	→	→	→	2	→	→	2		
1.0	→	→	→	→	→	2	→	→	2		
1.5	→	→	→	→	→	2	→	→	2		
2.2	→	→	→	→	→	2	→	→	2	→	12
3.3	→	→	→	→	2	2	→	→	2	12	12
4.7	→	→	→	→	2	2	2	→	2	12	13
6.8	→	→	→	→	→	2	2	→	2	13	14
10	→	→	2	2	2	2	2	→	2	14	15
15	→	→	→	2	2	2	2	3	3	15	18
22	→	2	2	2	2	3	3	→	5	18	21
33	→	→	2	2	3	4	5	6	7	21	27
47	→	2	2	3	4	5	6	8	10	26	34
68	→	2	3	4	5	7	9	11	13	32	44
100	→	2	4	5	7	10	13	16	20	42	60
150	→	3	5	8	11	15	19	24	30		
220	3	5	8	11	16	22	28	36	43		
330	4	7	11	17	24	33	42	53	66		
470	6	10	16	24	33	47	60	76	94		
680	9	13	22	34	48	68	86	109			
1,000	13	20	32	50	70	100	126				
1,500	19	30	48	75	105	150					
2,200	28	43	71	110	154						
3,300	42	66	106	165							
4,700	60	94	151								
6,800	86	136									
10,000	126										

6.1 LEAKAGE CURRENT CALCULATIONS

Leakage Current	
≤ 100 WVDC	$I_L \leq .002CV$ or 2uA*
> 100 WVDC	$I_L \leq .002CV + 10uA$

*Whichever value is greater

I_L = Leakage Current (uA)
C = Capacitance (Mfd.)
V = Rated D.C. Voltage (WVDC)

TEST METHOD: Capacitors to be preconditioned at + 25°C at rated voltage for 30 min. and not less than 18 hrs. prior to testing. Leakage Current shall be measured 5 minutes after application of voltage.

7.0 REVERSE VOLTAGE

Reverse voltage should not exceed 1.5 volts.

8.0 SURGE VOLTAGE (SV)

Rated WVDC	6.3	10	16	25	35	50	63	80	100	160	250
Surge Voltage	8	13	20	32	44	63	79	100	125	200	300

The Surge Voltage is the maximum voltage including peak ripple and transients to which the capacitor should be subjected under any conditions.

TEST METHOD: Capacitors shall be preconditioned at rated WVDC at + 25°C for a 30 minute period at least 18 but no more than 24 hours prior to testing. Capacitors will withstand 1,000 cycles of surge voltage application at + 105°C. Each cycle shall be of 30 seconds duration. The maximum surge voltage shall be applied through a 1,000 ohm resistor, immediately followed by a 5 minute discharge through a 1,000 ohm resistor. Upon completion of the test cycles, capacitors shall be allowed to cool for 30 minutes after which post-test measurements shall be made.

POST TEST PARAMETER VALUES

Capacitance Change: $\Delta C \leq$ 20% initial value
Dissipation Factor: ≤ 200% + 25°C specification
Leakage Current: ≤ 200% + 25°C specification

9.0 RMS RIPPLE CURRENT mA (85°C, 120 Hz) Peak Voltage not to exceed rated DC voltage

WV(SV) / MFD	6.3(8)	10(13)	16(20)	25(32)	35(44)	50(63)	63(79)	80(100)	100(125)	160(200	250(300)
0.47	→	→	→	→	→	9	→	→	9		
1.0	→	→	→	→	→	15	→	→	17		
1.5	→	→	→	→	→	18	→	→	22		
2.2	→	→	→	→	→	21	→	→	27	→	32
3.3	→	→	→	→	22	30	→	→	44	55	47
4.7	→	→	→	→	35	35	35	→	50	55	55
6.8	→	→	→	→	→	48	48	→	75	72	78
10	→	→	40	45	60	61	60	→	100	89	100
15	→	→	→	65	83	86	90	120	135	132	145
22	→	54	75	80	105	110	120	→	170	175	180
33	→	→	100	115	140	150	155	160	210	220	235
47	→	83	125	140	175	190	210	220	320	295	330
68	→	115	165	200	235	260	275	290	400	400	440
100	→	146	200	250	290	330	340	360	470	505	550
150	→	210	270	325	390	440	445	480	610		
220	240	260	335	400	480	545	550	600	750		
330	320	340	425	495	580	700	730	860	930		
470	420	440	575	725	780	900	925	950	1,060		
680	580	560	790	890	940	1,025	1,150	1,280			
1,000	690	730	1,000	1,150	1,200	1,250	1,550				
1,500	810	920	1,250	1,425	,1,675	1,720					
2,200	950	1,260	1,500	1,760	1,960						
3,300	1,250	1,600	1,800	2,050							
4,700	1,650	1,910	2,200								
6,800	2,000	2,200									
10,000	2,300										

9.1 RIPPLE CURRENT @ +105°C

Note: The maximum allowable Ripple Current (mA) at +105°C shall be less than 50% of the values given in table 9.0 for operation at +85°C.

9.2 RIPPLE CURRENT MULTIPLIER

Note: When operated at temperatures below +85°C or at frequencies higher than 120Hz RMS Ripple Current may be increased by the multiplier shown below.

Temperature	Multiplier[1]	Frequency	Multiplier[2]
+30°	2.2	60Hz	0.90
+45°	1.8	600Hz	1.15
+65°	1.4	1KHz	1.35
+70°	1.3	10KHz	1.55

1) 120Hz only 2) +85°C only

Caution: The surface temperature of the Capacitor shall not rise more than 10°C above the ambient temperature and shall never exceed +105°C.

9.3 RIPPLE CURRENT TEST

(500 hrs., +85°C dry circulating air, at maximum rated voltage and maximum ripple current.)

TEST METHOD: Capacitors shall be preconditioned at rated voltage for 30 min. prior to beginning the test. Parameters shall be measured in accordance with +25°C standard test procedures. Upon completion of the test, capacitors shall be allowed to cool to room temperature +25°C for 24 hours. Post test readings shall then be measured.

POST TEST PARAMETER VALUES

Capacitance:	≤100WVDC, ΔC≤50% initial readings >100WVDC, ΔC≤35% initial readings
Dissipation Factor:	≤100WVDC, DF ≤400% +25°C Specification >100WVDC, DF ≤450% +25°C Specification
Leakage Current:	≤150% Max. Values @ +25°C spec

ENVIRONMENTAL PERFORMANCE

10.0 OPERATING TEMPERATURE

type RMR capacitors are designed for operational use over the temperature range of −40°C to +105°C.

10.1 STORAGE TEMPERATURE

type RMR capacitors can be transported and stored at temperatures ranging from −55°C to +105°C for brief periods without permanent damage. Capacitors stored for periods exceeding 18 months should be checked in accordance with standard specifications prior to use.

10.2 CAPACITANCE CHANGE (△C): −25°C

WVDC	△C%
≤100	25%
160	30%
250	35%

10.3 CAPACITANCE CHANGE (△C): −40°C

≤100WVDC	△C≤40%

10.4 IMPEDANCE RATIO (MAXIMUM)

WVDC	TEMPERATURE RATIO	
	−25°C/+25°C	−40°C/+25°C
6.3	4	8
10	3	6
16	2	4
25	2	4
35	2	3
50	2	3
63	2	3
80	2	3
100	2	3
160	2	3
250	2	3

TEST METHOD: Capacitors shall reach equilibrium at −25°C. Capacitance and impedance shall be measured at 120 Hz, zero bias and ≤.5VRMS using the bridge method.

Impedance $(Z) = \sqrt{(ESR)^2 + (X_c)^2}$

Capacitive Reactance $(X_c) = \frac{1}{2\pi fC}$

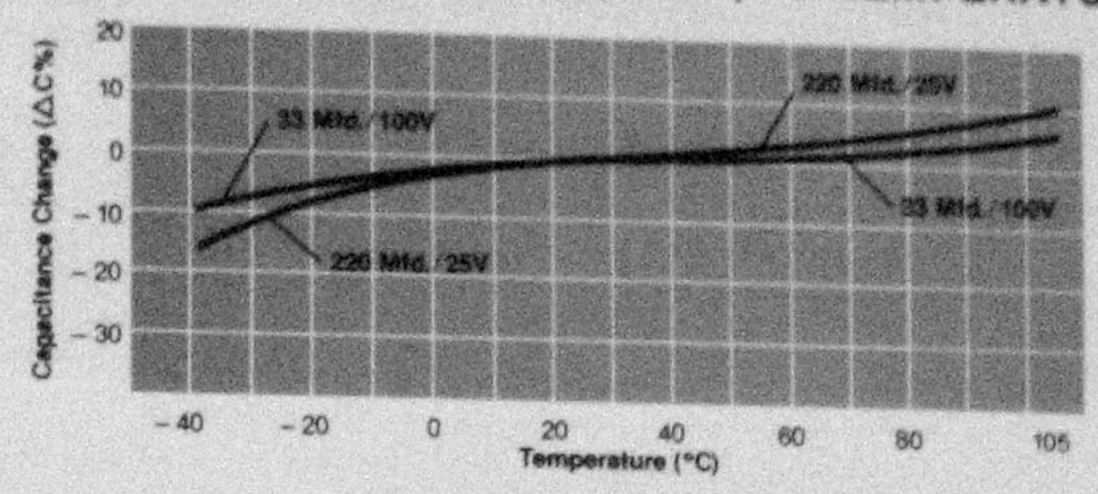
$(ESR) = (X_c) \bullet (DF)$

C = Capacitance in Farads

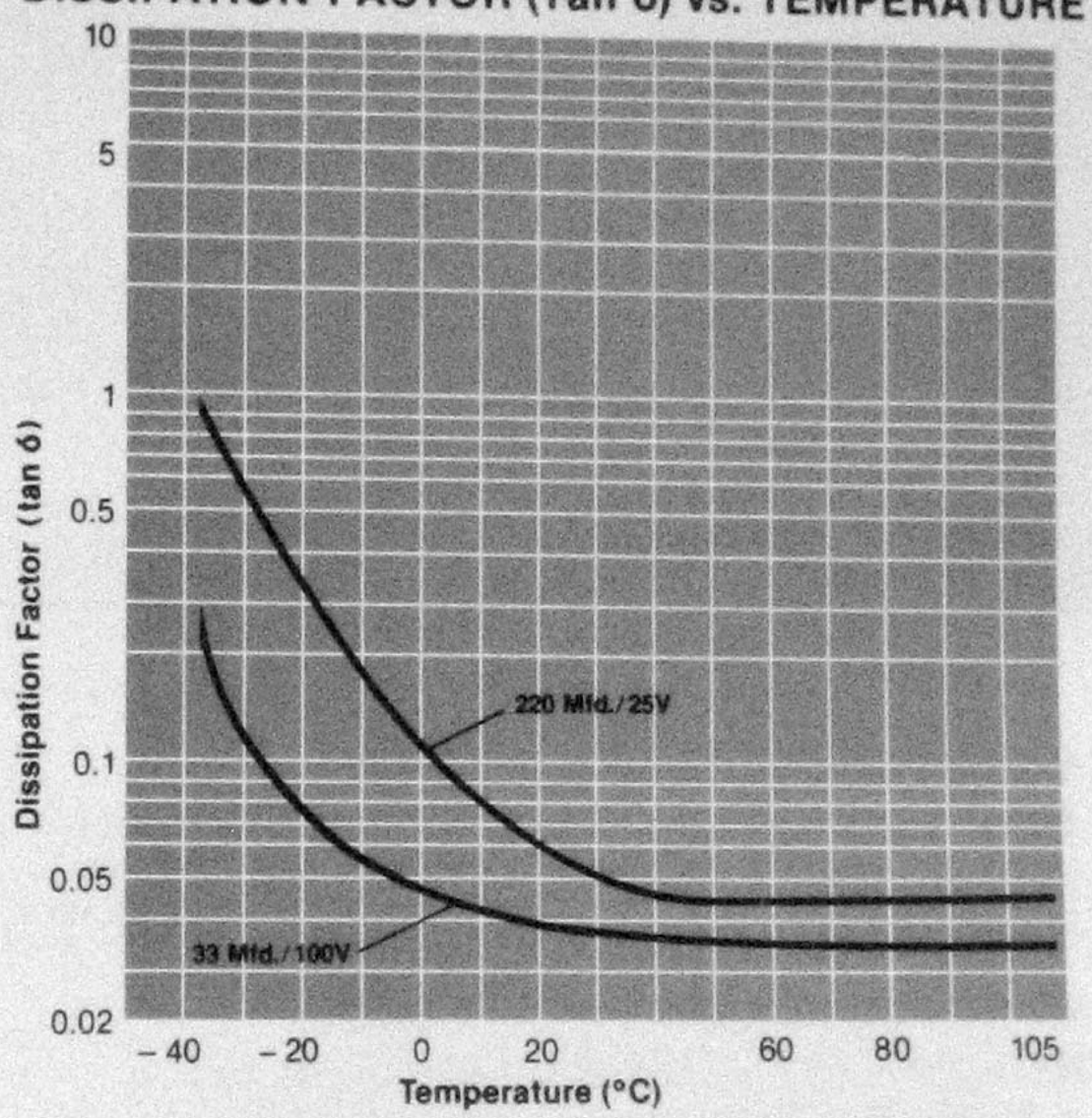
f = frequency in Hertz

DF = Dissipation Factor (decimal equivalent)

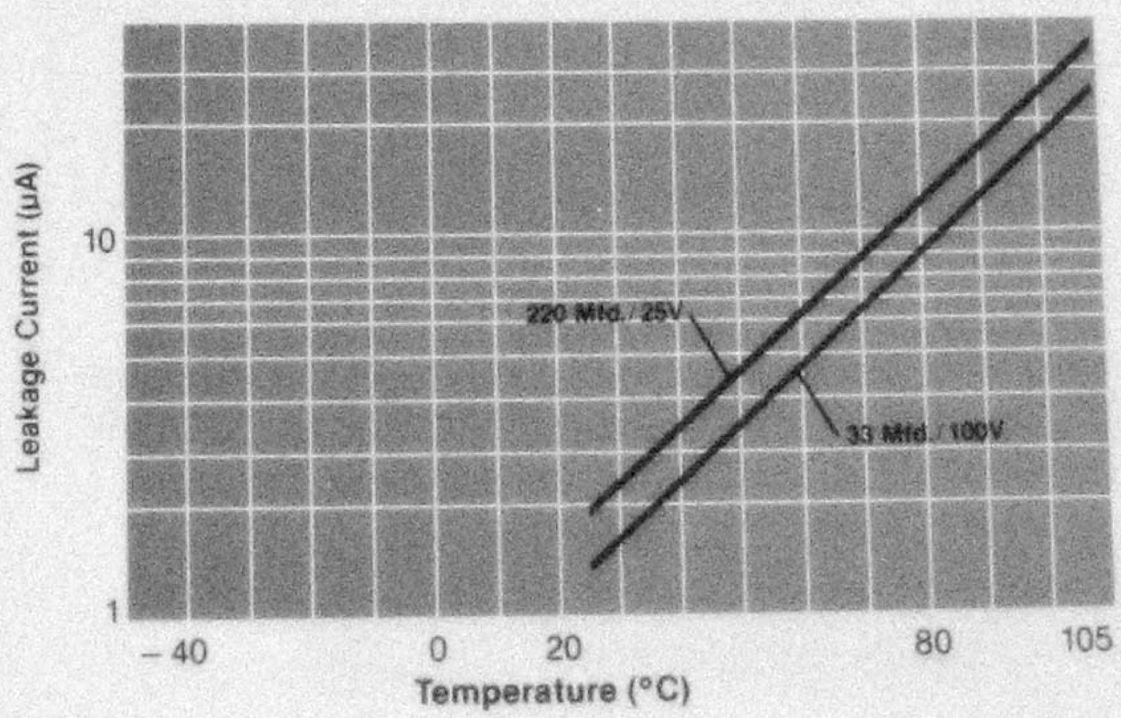
CAPACITANCE CHANGE (△C%) vs. TEMPERATURE



DISSIPATION FACTOR (Tan δ) vs. TEMPERATURE



LEAKAGE CURRENT vs. TEMPERATURE



Note: These graphs reflect typical measurements.

11.0 ENDURANCE TEST

(2,000 hrs., dry circulating air, @ rated voltage)

TEST METHOD: Capacitors shall be preconditioned at rated voltage for 30 min. prior to beginning the test. Parameters shall be measured in accordance with standard test procedures at +25°C. Upon completion of the test, capacitors shall be allowed to cool to room temperature +25°C for 24 hours. Post test readings shall then be measured.

11.1 2,000 HOURS @ +105°C

POST TEST PARAMETER VALUES

Capacitance:	≤16WVDC, △C≤30% initial readings
	≥25WVDC, △C≤25% initial readings
Dissipation Factor:	≤16WVDC, DF ≤200% +25°C Specification
	≥25WVDC, DF ≤250% +25°C Specification
Leakage Current:	≤ +25°C Max. allowable values

11.2 2,000 HOURS @ +85°C

POST TEST PARAMETER VALUES

Capacitance:	≤16WVDC, △C≤30% initial readings
	≥25WVDC, △C≤25% initial readings
Dissipation Factor:	≤16WVDC, DF ≤200% +25°C Specification
	≥25WVDC, DF <250% +25°C Specification
Leakage Current:	≤ +25°C Max. allowable values

12.0 SHELF LIFE TEST

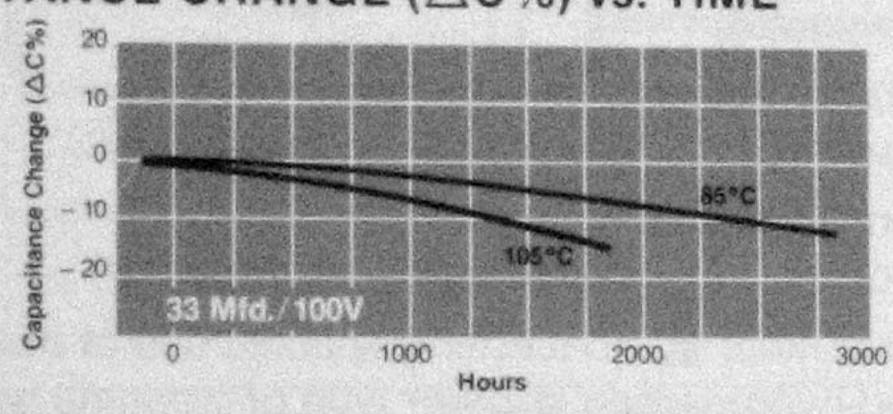
(500 hrs., +85°C, no applied voltage)

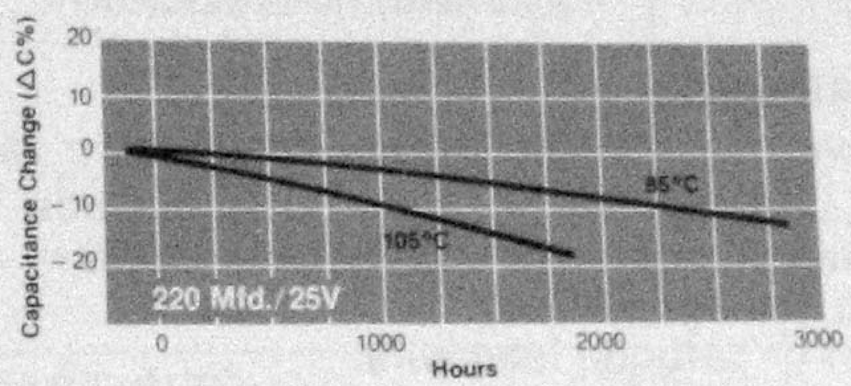
TEST METHOD: Capacitors shall be preconditioned at rated voltage for 30 min. prior to beginning the test. Parameters shall be measured in accordance with standard test procedures at +25°C. Upon completion of the test, capacitors shall be allowed to cool to room temperature +25°C for 24 hours. Capacitors shall be preconditioned at rated voltage for 30 min. prior to post test readings.

POST TEST PARAMETER VALUES

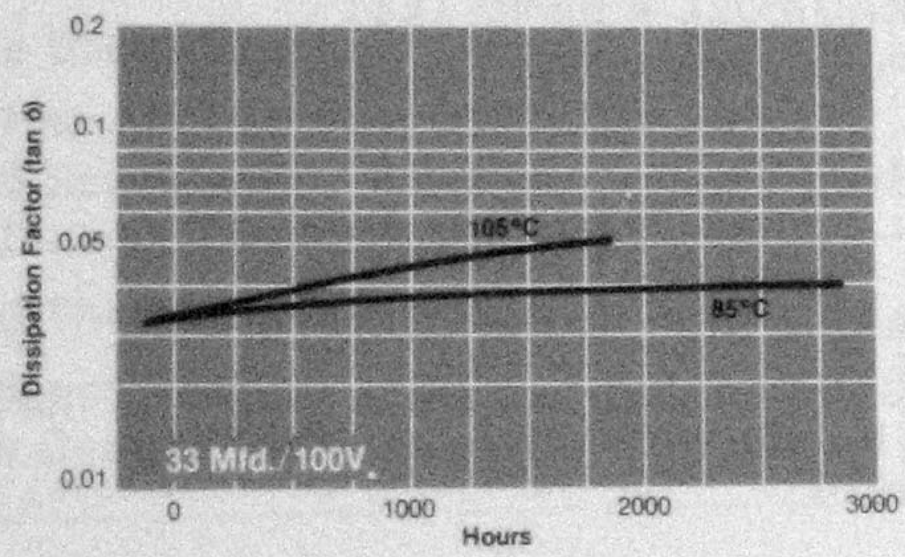
Capacitance:	Within standard tolerances
Dissipation Factor:	≤250% +25°C Specification
Leakage Current:	≤300% +25°C Specification

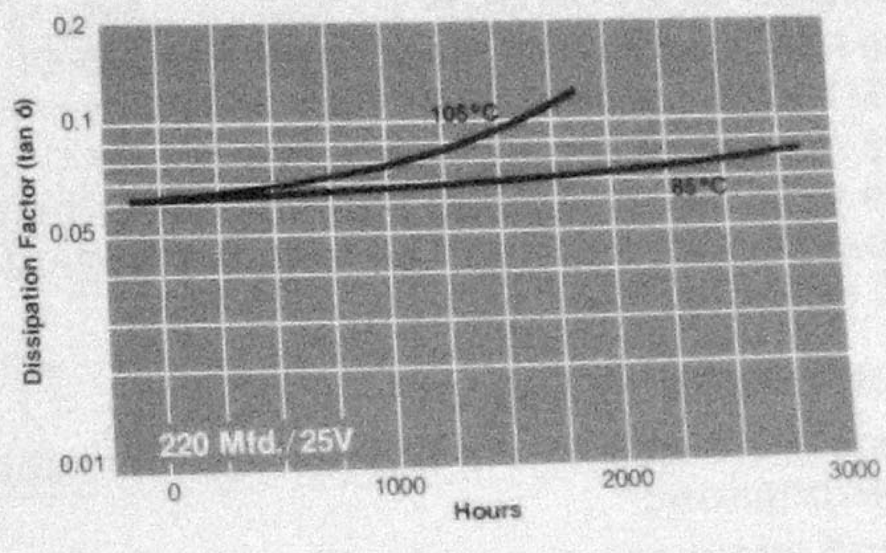
CAPACITANCE CHANGE (△C%) vs. TIME



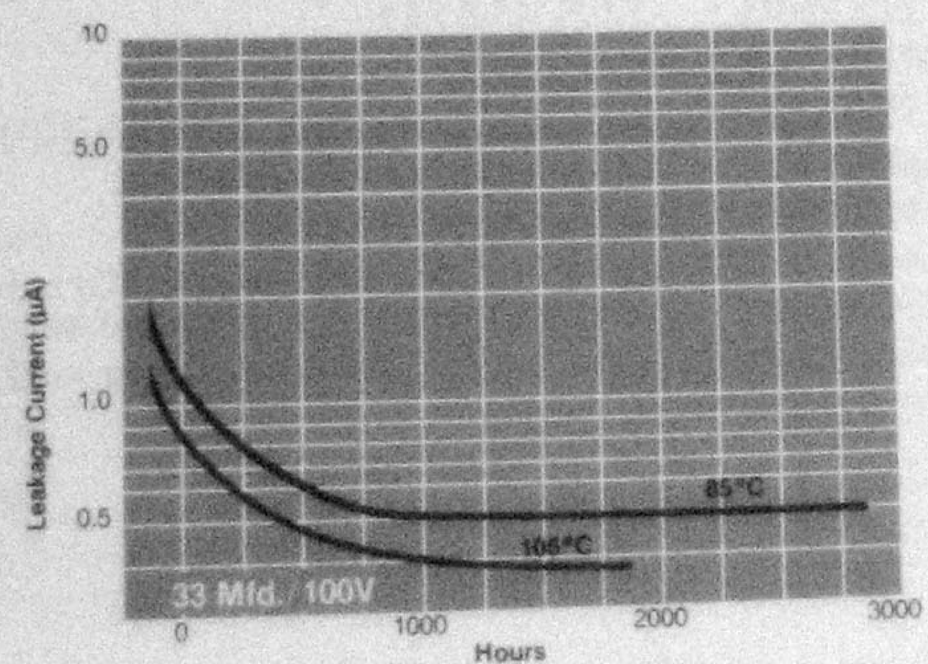


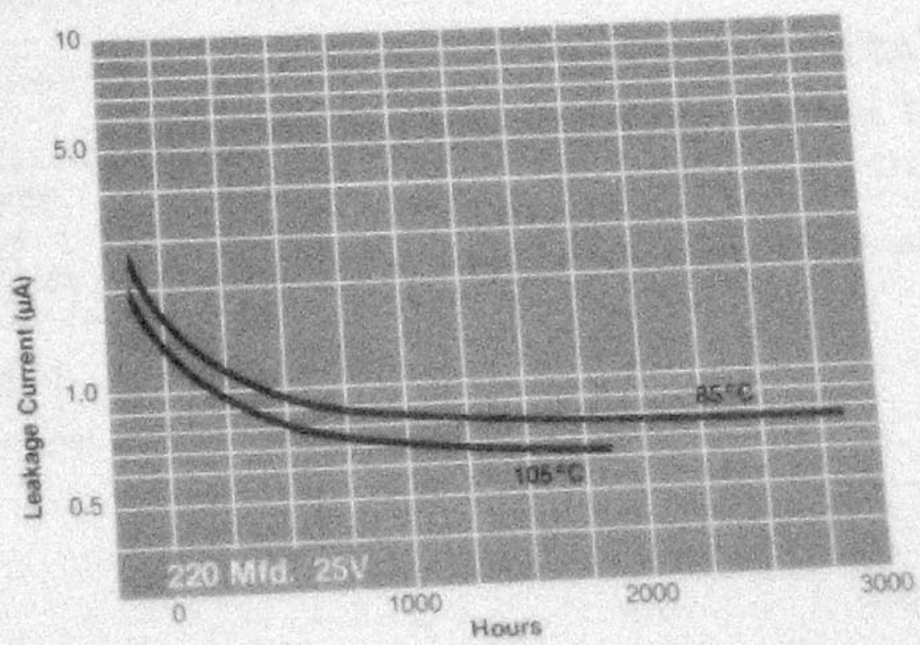
DISSIPATION FACTOR (Tan δ) vs. TIME





LEAKAGE CURRENT vs. TIME





Note: These graphs reflect typical measurements.

MECHANICAL SPECIFICATIONS

13.0 CONSTRUCTION

Electrodes:	Highest purity Aluminum.
Separation:	Porous paper impregnated with a high stability electrolyte.
Termination:	Welded for high mechanical and electrical strength.
Case:	Extruded Aluminum can.
Windings:	Low inductance. Hermetically sealed within the case.
Seals:	Highest quality rubber or rubber/phenolic end seals. Vented safety end seals on selected sizes. Epoxy end seals are available on request (Type RMR-PX).

14.0 INSULATING SLEEVE

Standard Sleeve:	Polyvinyl Chloride (PVC).
Optional Material:	MYLAR® or Polyester.
Insulation Resistance:	≥ 50 Megohms @100WVDC.
Dielectric Strength:	1.5kV for 30 seconds with no breakdown.

15.0 MARKINGS

Location:	On Sleeve or Aluminum can.
IC or ILLINOIS.	Date Code
Capacitance (Mfd.).	+ 105 °C
Working Voltage (WVDC).	RMR
Location of cathode lead wire.	

16.0 SHOCK & VIBRATION

IC type RMR capacitors meet requirements of MIL STD 202D method 204B Part A: 10g or O-50Hz maximum total of 9 hours with no serious external or internal damage. After test, electrical performance will be within standard + 25 °C specifications.

17.0 CONTAINER SEALS

End seals are made of the highest quality rubber or rubber/phenolic.

Epoxy end seals are available. (Type RMR-PX).

18.0 SAFETY VENTING

Vented safety end seals are supplied on selected case sizes.

Note! Case Vent is on all parts with Diameter ≥ $\frac{.315}{8.0}$

19.0 SOLDERABILITY

IC type RMR capacitors meet the solderability requirements of MIL STD 202D, method 208B. Flow soldering can be used when the above temperature-time considerations are observed. Follow limits outlined in EIA RS395 par. 2.1.4.

20.0 CLEANING AGENTS

Epoxy End Seals are available on all Type RMR capacitors and are recommended when used with halogenated solvents.

Note: Use of Halogenated Hydrocarbon cleaning solvents can contaminate aluminum electrolytic capacitors without proper barrier protection.

Solvents normally considered safe:*

Methyl Alcohol	Xylene
Ethyl Alcohol	Alconox (Water Sol.)
Propyl Alcohol	Butyl Alcohol

Epoxy and/or Solvent Tolerant Elastomer End Seals are available on most aluminum electrolytic capacitors. These end seals will permit use with the following halogenated solvents with a maximum exposure period of five minutes.

Acceptable Solvents:

Freon® TE Freon® TS Freon® TMS

Cleaning Systems:

Vapor Immersion Ultrasonic

Please contact IC concerning specific use of any halogenated hydrocarbon or other type of cleaning solvent.

21.0 LEAD PULL & BEND TEST

Lead Pull Test:	3lbs axially for 10 seconds (MIL STD 202D method 211A part A)
Lead Bend Test	1lb. for one cycle (MIL STD 202D method 211A part C)

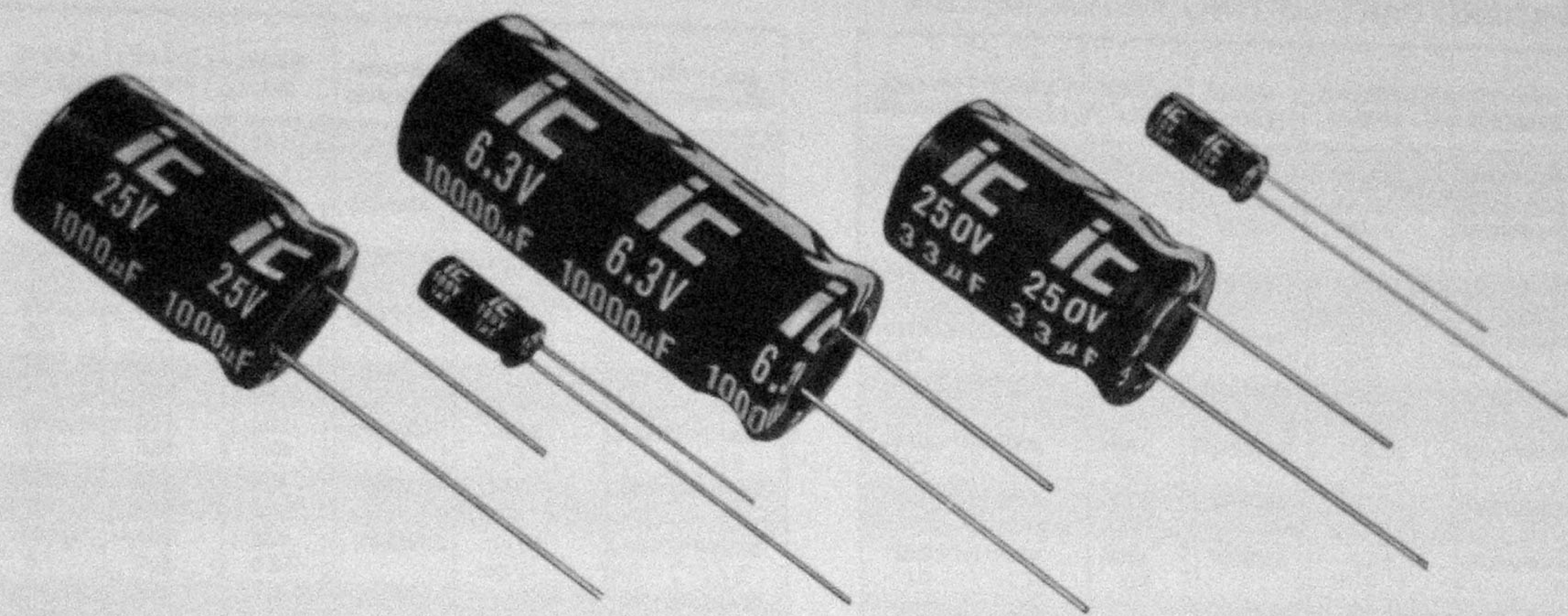
22.0 TAPE & REEL CONFIGURATIONS

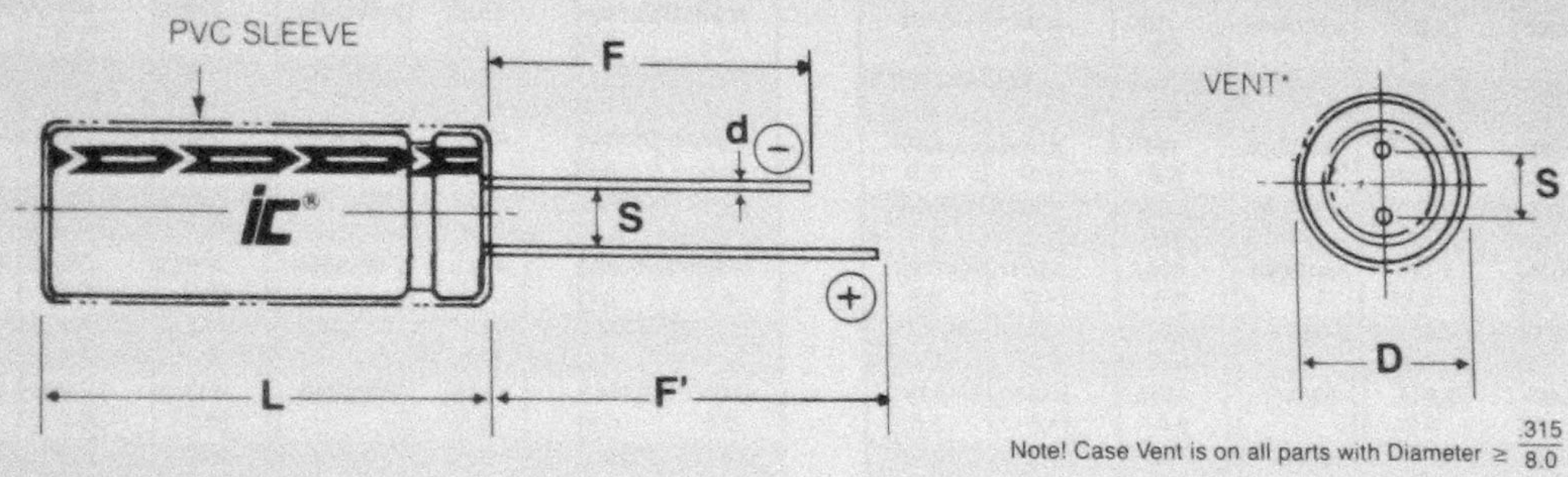
IC type RMR capacitors are available on tape or reel for use with automatic insertion equipment.

23.0 STANDARD TEST METHODS

E.I.A. RS154B	J.I.S.-C-5141
E.I.A. RS178B	MIL-C-62
E.I.A. RS205	MIL-202D (shock & vibration)
E.I.A. RS395	International Electronic
E.I.A. RS468	Standards

*No guarantees or warranties are expressed or implied with the use of any solvents. Chlorinated solvents will swell PVC sleeving and may result in cracking after exposure.





Note! Case Vent is on all parts with Diameter ≥ .315/8.0

RMR LEAD INFORMATION vs. CASE SIZE (inches/mm)							
Case Diameter (D)	.197/5.0	.248/6.3	.315/8.0	.394/10.0	.492/12.5	.630/16.0	.709/18.0
Lead Spacing (S)	.079/2.0	.098/2.5	.138/3.5	.197/5.0	.197/5.0	.295/7.5	.295/7.5
Lead Thickness (d)	.020/.5	.020/.5	.024/.6	.024/.6	.024/.6	.032/.8	.032/.8
Wire Gauge (AWG)	24	24	22	22	22	20	20

CASE TOLERANCE (inches/mm.)			
Case Diameter (D)	Tolerance Case Diameter (D)	Case Length (L)	Tolerance Case Length (L)
≤ .394/10.0	≤ ±.020/±0.5	≤ .492/12.5	≤ ±.059/±1.5
≥ .492/12.5	≤ ±.039/±1.0	≥ .787/20.0	≤ ±.078/±2.0

LEAD LENGTH (inches/mm)		
Cathode Lead Length (F)	Anode Lead Length (F')	Lead Spacing Tolerance (S)
.591/15.0 MIN.	.787/20.0 MIN.	±.02/±0.5

ALUMINUM ELECTROLYTIC CAPACITORS
+105°C Subminiature

RMR

STANDARD PART LISTING Tolerances: (M): ±20%

Inches/mm.

PART NUMBER	CAPACITY MFD.	WVDC (SVDC)	CASE DIA	CASE LENGTH	LEAD SPACING
474RMR050M	0.47	50(63)	.197 5.0	.433 11.0	.079 2.0
105RMR050M	1.0	50(63)	.197 5.0	.433 11.0	.079 2.0
105RMR100M	1.0	100(125)	.197 5.0	.433 11.0	.079 2.0
155RMR050M	1.5	50(63)	.197 5.0	.433 11.0	.079 2.0
225RMR050M	2.2	50(63)	.197 5.0	.433 11.0	.079 2.0
225RMR100M	2.2	100(125)	.197 5.0	.433 11.0	.079 2.0
225RMR250M	2.2	250(300)	.315 8.0	.630 16.0	.138 3.5
335RMR050M	3.3	50(63)	.197 5.0	.433 11.0	.079 2.0
335RMR100M	3.3	100(125)	.197 5.0	.433 11.0	.079 2.0
335RMR250M	3.3	250(300)	.315 8.0	.630 16.0	.138 3.5
475RMR050M	4.7	50(63)	.197 5.0	.433 11.0	.079 2.0
475RMR063M	4.7	63(79)	.197 5.0	.433 11.0	.079 2.0
475RMR100M	4.7	100(125)	.248 6.3	.433 11.0	.098 2.5
475RMR160M	4.7	160(200)	.315 8.0	.551 14.0	.138 3.5
475RMR250M	4.7	250(300)	.394 10.0	.630 16.0	.197 5.0
685RMR050M	6.8	50(63)	.197 5.0	.433 11.0	.079 2.0
106RMR050M	10	50(63)	.197 5.0	.433 11.0	.079 2.0
106RMR063M	10	63(79)	.248 6.3	.433 11.0	.098 2.5
106RMR100M	10	100(125)	.315 8.0	.453 11.5	.138 3.5
106RMR160M	10	160(200)	.394 10.0	.630 16.0	.197 5.0
106RMR250M	10	250(300)	.492 12.5	.787 20.0	.197 5.0
156RMR035M	15	35(44)	.197 5.0	.433 11.0	.079 2.0
156RMR050M	15	50(63)	.248 6.3	.433 11.0	.098 2.5
156RMR100M	15	100(125)	.315 8.0	.453 11.5	.138 3.5
156RMR160M	15	160(200)	.394 10.0	.787 20.0	.197 5.0
156RMR250M	15	250(300)	.492 12.5	.787 20.0	.197 5.0
226RMR025M	22	25(32)	.197 5.0	.433 11.0	.079 2.0
226RMR035M	22	35(44)	.248 6.3	.433 11.0	.098 2.5
226RMR050M	22	50(63)	.248 6.3	.433 11.0	.098 2.5
226RMR063M	22	63(79)	.315 8.0	.453 11.5	.138 3.5
226RMR100M	22	100(125)	.394 10.0	.492 12.5	.197 5.0
226RMR160M	22	160(200)	.492 12.5	.787 20.0	.197 5.0
226RMR250M	22	250(300)	.492 12.5	.984 25.0	.197 5.0

PART NUMBER	CAPACITY MFD.	WVDC (SVDC)	CASE DIA	CASE LENGTH	LEAD SPACING
336RMR016M	33	16(20)	.197 5.0	.433 11.0	.079 2.0
336RMR035M	33	35(44)	.248 6.3	.433 11.0	.098 2.5
336RMR050M	33	50(63)	.315 8.0	.453 11.5	.138 3.5
336RMR063M	33	63(79)	.315 8.0	.453 11.5	.138 3.5
336RMR080M	33	80(100)	.394 10.0	.630 16.0	.197 5.0
336RMR100M	33	100(125)	.394 10.0	.630 16.0	.197 5.0
336RMR160M	33	160(200)	.492 12.5	.984 25.0	.197 5.0
336RMR250M	33	250(300)	.630 16.0	.984 25.0	.295 7.5
476RMR010M	47	10(13)	.197 5.0	.433 11.0	.079 2.0
476RMR025M	47	25(32)	.248 6.3	.433 11.0	.098 2.5
476RMR050M	47	50(63)	.315 8.0	.453 11.5	.138 3.5
476RMR063M	47	63(79)	.394 10.0	.492 12.5	.197 5.0
476RMR080M	47	80(100)	.394 10.0	.630 16.0	.197 5.0
476RMR100M	47	100(125)	.394 10.0	.787 20.0	.197 5.0
476RMR160M	47	160(200)	.630 16.0	.984 25.0	.295 7.5
476RMR250M	47	250(300)	.630 16.0	1.240 31.5	.295 7.5
686RMR016M	68	16(20)	.248 6.3	.433 11.0	.098 2.5
686RMR035M	68	35(44)	.315 8.0	.453 11.5	.138 3.5
686RMR050M	68	50(63)	.394 10.0	.492 12.5	.197 5.0
686RMR063M	68	63(79)	.394 10.0	.630 16.0	.197 5.0
686RMR080M	68	80(100)	.394 10.0	.787 20.0	.197 5.0
686RMR100M	68	100(125)	.394 10.0	.787 20.0	.197 5.0
686RMR160M	68	160(200)	.630 16.0	1.240 31.5	.295 7.5
686RMR250M	68	250(300)	.630 16.0	1.398 35.5	.295 7.5
107RMR010M	100	10(13)	.248 6.3	.433 11.0	.098 2.5
107RMR025M	100	25(32)	.315 8.0	.453 11.5	.138 3.5
107RMR035M	100	35(44)	.394 10.0	.492 12.5	.197 5.0
107RMR050M	100	50(63)	.394 10.0	.630 16.0	.197 5.0
107RMR063M	100	63(79)	.394 10.0	.787 20.0	.197 5.0
107RMR100M	100	100(125)	.492 12.5	.787 20.0	.197 5.0
107RMR160M	100	160(200)	.630 16.0	1.398 35.5	.295 7.5
107RMR250M	100	250(300)	.709 18.0	1.575 40.0	.295 7.5
157RMR016M	150	16(20)	.315 8.0	.453 11.5	.138 3.5

ALUMINUM ELECTROLYTIC CAPACITORS
+105°C Subminiature

RMR

STANDARD PART LISTING Tolerances: (M): ±20%

inches/mm.

PART NUMBER	CAPACITY MFD.	WVDC (SVDC)	CASE DIA	CASE LENGTH	LEAD SPACING
474RMR050M	0.47	50(63)	.197 5.0	.433 11.0	.079 2.0
105RMR050M	1.0	50(63)	.197 5.0	.433 11.0	.079 2.0
105RMR100M	1.0	100(125)	.197 5.0	.433 11.0	.079 2.0
155RMR050M	1.5	50(63)	.197 5.0	.433 11.0	.079 2.0
225RMR050M	2.2	50(63)	.197 5.0	.433 11.0	.079 2.0
225RMR100M	2.2	100(125)	.197 5.0	.433 11.0	.079 2.0
225RMR250M	2.2	250(300)	.315 8.0	.630 16.0	.138 3.5
335RMR050M	3.3	50(63)	.197 5.0	.433 11.0	.079 2.0
335RMR100M	3.3	100(125)	.197 5.0	.433 11.0	.079 2.0
335RMR250M	3.3	250(300)	.315 8.0	.630 16.0	.138 3.5
475RMR050M	4.7	50(63)	.197 5.0	.433 11.0	.079 2.0
475RMR063M	4.7	63(79)	.197 5.0	.433 11.0	.079 2.0
475RMR100M	4.7	100(125)	.248 6.3	.433 11.0	.098 2.5
475RMR160M	4.7	160(200)	.315 8.0	.551 14.0	.138 3.5
475RMR250M	4.7	250(300)	.394 10.0	.630 16.0	.197 5.0
685RMR050M	6.8	50(63)	.197 5.0	.433 11.0	.079 2.0
106RMR050M	10	50(63)	.197 5.0	.433 11.0	.079 2.0
106RMR063M	10	63(79)	.248 6.3	.433 11.0	.098 2.5
106RMR100M	10	100(125)	.315 8.0	.453 11.5	.138 3.5
106RMR160M	10	160(200)	.394 10.0	.630 16.0	.197 5.0
106RMR250M	10	250(300)	.492 12.5	.787 20.0	.197 5.0
156RMR035M	15	35(44)	.197 5.0	.433 11.0	.079 2.0
156RMR050M	15	50(63)	.248 6.3	.433 11.0	.098 2.5
156RMR100M	15	100(125)	.315 8.0	.453 11.5	.138 3.5
156RMR160M	15	160(200)	.394 10.0	.787 20.0	.197 5.0
156RMR250M	15	250(300)	.492 12.5	.787 20.0	.197 5.0
226RMR025M	22	25(32)	.197 5.0	.433 11.0	.079 2.0
226RMR035M	22	35(44)	.248 6.3	.433 11.0	.098 2.5
226RMR050M	22	50(63)	.248 6.3	.433 11.0	.098 2.5
226RMR063M	22	63(79)	.315 8.0	.453 11.5	.138 3.5
226RMR100M	22	100(125)	.394 10.0	.492 12.5	.197 5.0
226RMR160M	22	160(200)	.492 12.5	.787 20.0	.197 5.0
226RMR250M	22	250(300)	.492 12.5	.984 25.0	.197 5.0

PART NUMBER	CAPACITY MFD.	WVDC (SVDC)	CASE DIA	CASE LENGTH	LEAD SPACING
336RMR016M	33	16(20)	.197 5.0	.433 11.0	.079 2.0
336RMR035M	33	35(44)	.248 6.3	.433 11.0	.098 2.5
336RMR050M	33	50(63)	.315 8.0	.453 11.5	.138 3.5
336RMR063M	33	63(79)	.315 8.0	.453 11.5	.138 3.5
336RMR080M	33	80(100)	.394 10.0	.630 16.0	.197 5.0
336RMR100M	33	100(125)	.394 10.0	.630 16.0	.197 5.0
336RMR160M	33	160(200)	.492 12.5	.984 25.0	.197 5.0
336RMR250M	33	250(300)	.630 16.0	.984 25.0	.295 7.5
476RMR010M	47	10(13)	.197 5.0	.433 11.0	.079 2.0
476RMR025M	47	25(32)	.248 6.3	.433 11.0	.098 2.5
476RMR050M	47	50(63)	.315 8.0	.453 11.5	.138 3.5
476RMR063M	47	63(79)	.394 10.0	.492 12.5	.197 5.0
476RMR080M	47	80(100)	.394 10.0	.630 16.0	.197 5.0
476RMR100M	47	100(125)	.394 10.0	.787 20.0	.197 5.0
476RMR160M	47	160(200)	.630 16.0	.984 25.0	.295 7.5
476RMR250M	47	250(300)	.630 16.0	1.240 31.5	.295 7.5
686RMR016M	68	16(20)	.248 6.3	.433 11.0	.098 2.5
686RMR035M	68	35(44)	.315 8.0	.453 11.5	.138 3.5
686RMR050M	68	50(63)	.394 10.0	.492 12.5	.197 5.0
686RMR063M	68	63(79)	.394 10.0	.630 16.0	.197 5.0
686RMR080M	68	80(100)	.394 10.0	.787 20.0	.197 5.0
686RMR100M	68	100(125)	.394 10.0	.787 20.0	.197 5.0
686RMR160M	68	160(200)	.630 16.0	1.240 31.5	.295 7.5
686RMR250M	68	250(300)	.630 16.0	1.398 35.5	.295 7.5
107RMR010M	100	10(13)	.248 6.3	.433 11.0	.098 2.5
107RMR025M	100	25(32)	.315 8.0	.453 11.5	.138 3.5
107RMR035M	100	35(44)	.394 10.0	.492 12.5	.197 5.0
107RMR050M	100	50(63)	.394 10.0	.630 16.0	.197 5.0
107RMR063M	100	63(79)	.394 10.0	.787 20.0	.197 5.0
107RMR100M	100	100(125)	.492 12.5	.787 20.0	.197 5.0
107RMR160M	100	160(200)	.630 16.0	1.398 35.5	.295 7.5
107RMR250M	100	250(300)	.709 18.0	1.575 40.0	.295 7.5
157RMR016M	150	16(20)	.315 8.0	.453 11.5	.138 3.5

STANDARD PART LISTING

inches/mm.

ic PART NUMBER	CAPACITY MFD.	WVDC (SVDC)	CASE DIA	CASE LENGTH	LEAD SPACING
157RMR025M	150	25(32)	.394 10.0	.492 12.5	.197 5.0
157RMR035M	150	35(44)	.394 10.0	.630 16.0	.197 5.0
157RMR050M	150	50(63)	.394 10.0	.787 20.0	.197 5.0
157RMR063M	150	63(79)	.492 12.5	.787 20.0	.197 5.0
157RMR080M	150	80(100)	.492 12.5	.787 20.0	.197 5.0
157RMR100M	150	100(125)	.492 12.5	.787 20.0	.197 5.0
227RMR010M	220	10(13)	.315 8.0	.453 11.5	.138 3.5
227RMR016M	220	16(20)	.394 10.0	.492 12.5	.197 5.0
227RMR025M	220	25(32)	.394 10.0	.630 16.0	.197 5.0
227RMR035M	220	35(44)	.394 10.0	.787 20.0	.197 5.0
227RMR050M	220	50(63)	.492 12.5	.787 20.0	.197 5.0
227RMR063M	220	63(79)	.492 12.5	.787 20.0	.197 5.0
227RMR080M	220	80(100)	.492 12.5	.984 25.0	.197 5.0
227RMR100M	220	100(125)	.630 16.0	.984 25.0	.295 7.5
337RMR010M	330	10(13)	.394 10.0	.492 12.5	.197 5.0
337RMR016M	330	16(20)	.394 10.0	.630 16.0	.197 5.0
337RMR025M	330	25(32)	.394 10.0	.787 20.0	.197 5.0
337RMR050M	330	50(63)	.492 12.5	.787 20.0	.197 5.0
337RMR063M	330	63(79)	.492 12.5	.984 25.0	.197 5.0
337RMR080M	330	80(100)	.630 16.0	.240 31.5	.295 7.5
337RMR100M	330	100(125)	.630 16.0	1.240 31.5	.295 7.5
477RMR6R3M	470	6.3(8)	.394 10.0	.492 12.5	.197 5.0
477RMR010M	470	10(13)	.394 10.0	.630 16.0	.197 5.0
477RMR016M	470	16(20)	.394 10.0	.787 20.0	.197 5.0
477RMR025M	470	25(32)	.492 12.5	.787 20.0	.197 5.0
477RMR035M	470	35(44)	.492 12.5	.984 25.0	.197 5.0
477RMR050M	470	50(63)	.630 16.0	.984 25.0	.295 7.5
477RMR063M	470	63(79)	.630 16.0	.984 25.0	.295 7.5
477RMR080M	470	80(100)	.630 16.0	1.398 35.5	.295 7.5
477RMR100M	470	100(125)	.709 18.0	1.398 35.5	.295 7.5
687RMR6R3M	680	6.3(8)	.394 10.0	.630 16.0	.197 5.0
687RMR010M	680	10(13)	.394 10.0	.787 20.0	.197 5.0

ic PART NUMBER	CAPACITY MFD.	WVDC (SVDC)	CASE DIA	CASE LENGTH	LEAD SPACING
687RMR016M	680	16(20)	.492 12.5	.787 20.0	.197 5.0
687RMR025M	680	25(32)	.492 12.5	.984 25.0	.197 5.0
687RMR035M	680	35(44)	.630 16.0	.984 25.0	.295 7.5
687RMR050M	680	50(63)	.630 16.0	.984 25.0	.295 7.5
687RMR063M	680	63(79)	.630 16.0	1.240 31.5	.295 7.5
687RMR080M	680	80(100)	.709 18.0	1.398 35.5	.295 7.5
108RMR6R3M	1,000	6.3(8)	.394 10.0	.787 20.0	.197 5.0
108RMR010M	1,000	10(13)	.492 12.5	.787 20.0	1.97 5.0
108RMR016M	1,000	16(20)	.492 12.5	.984 25.0	.197 5.0
108RMR025M	1,000	25(32)	.630 16.0	.984 25.0	.295 7.5
108RMR035M	1,000	35(44)	.630 16.0	.984 25.0	.295 7.5
108RMR050M	1,000	50(63)	.630 16.0	1.240 31.5	.295 7.5
108RMR063M	1,000	63(79)	.709 18.0	1.398 35.5	.295 7.5
158RMR010M	1,500	10(13)	.492 12.5	.984 25.0	.197 5.0
158RMR016M	1,500	16(20)	.630 16.0	.984 25.0	.295 7.5
158RMR025M	1,500	25(32)	.630 16.0	1.240 31.5	.295 7.5
158RMR035M	1,500	35(44)	.630 16.0	1.398 35.5	.295 7.5
158RMR050M	1,500	50(63)	.709 18.0	1.575 40.0	.295 7.5
228RMR6R3M	2,200	6.3(8)	.492 12.5	.984 25.0	.197 5.0
228RMR016M	2,200	16(20)	.630 16.0	.984 25.0	.295 7.5
228RMR025M	2,200	25(32)	.630 16.0	1.398 35.5	.295 7.5
228RMR035M	2,200	35(44)	.709 18.0	1.398 35.5	.295 7.5
338RMR6R3M	3,300	6.3(8)	.630 16.0	.984 25.0	.295 7.5
338RMR010M	3,300	10(13)	.630 16.0	1.240 31.5	.295 7.5
338RMR016M	3,300	16(20)	.630 16.0	1.398 35.5	.295 7.5
338RMR025M	3,300	25(32)	.709 18.0	1.575 40.0	.295 7.5
478RMR6R3M	4,700	6.3(8)	.630 16.0	1.240 31.5	.295 7.5
478RMR010M	4,700	10(13)	.630 16.0	1.398 35.5	.295 7.5
478RMR016M	4,700	16(20)	.709 18.0	1.398 35.5	.295 7.5
688RMR6R3M	6,800	6.3(8)	.630 16.0	1.398 35.5	.295 7.5
688RMR010M	6,800	10(13)	.709 18.0	1.575 40.0	.295 7.5
109RMR6R3M	10,000	6.3(8)	.709 18.0	1.575 40.0	.295 7.5

NOTE: WVDC: Rated DC Working Voltage
SVDC: Maximum DC Surge Voltage