Hongda Capacitors®
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RRF Series, Radial Aluminum Electrolytic Capacitors, high ripple current

◎105℃, 3000~6000hours

◎Ultra low impedance，high ripple current.

◎RoHS Compliant

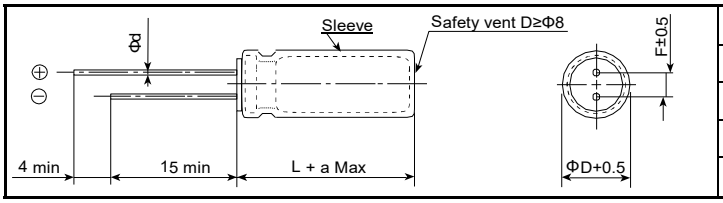
How to order

RRF	338	M	016	01250250	050	B	000	-
Type	**Capacitance code**	**Tolerance**	**Rated Voltage**	**Size Code**	**Pitch**	**Package**	**Lead Length**	**Additional characters maybe added for special requirements**
RGE RGR RGL RRF	pF Code: 1st two digits represent significant figures 3rd digit represents multiplier (Number of zeros to follow) 107 = 100uF 108 = 1000uF 338 = 3300uF	M: -20%~+20%	Code 016: 16VDC For DC Voltage 006: 6.3VDC 016: 16VDC 035: 35VDC 200: 200VDC 450: 450VDC	Code 01250250: Size 12.5*25mm 00630110: Size 6.3*11mm 01250250: Size 12.5*25mm 01600250: Size 16*25mm	Axial: 000 2.0: 020 2.5: 025 3.5: 035 5.0: 050 7.5: 075	B: BULK T: AMMO TAPED	Standard: 000 Cut Lead Length: 3.0mm：030 3.5mm: 035 4.0mm: 040 4.5mm：045 5.0mm：050	

Specifications

Items	Characteristics										
Operating temperature range	-40~+105°C										
Rated Voltage Range	6.3~120 Vdc										
Nominal capacitance toletance	6.8μF~6800μF										
Capacitance Tolerance	±20% (120Hz·20℃)										
Leakage Current	I≤0.01CV or 3μA .whichever is greater.										
	I: Leakage current (μA),C:Nominal capacitance (μF),V: Rated voltage (V)										
Dissipation Factor (tanδ)	Rated Voltage(Vdc)	6.3	10	16	25	35	50	63	80	100	120
	tanδ (max .)	0.15	0.14	0.12	0.10	0.10	0.08	0.08	0.08	0.08	0.12
	When nominal capacitance exceeds 1000μF, add 0.02 to the value above for each 1000μF increase.										
Low Temperature Characteristics (Max. Impedance Ratio)	Rated Voltage(Vdc)	6.3	10	16	25	35	50	63	80	100	120
	Z(-25°C)/Z(+20°C)	5	4	3							
	Z(-40°C)/Z(+20°C)	10	8	5	4						6
Endurance	The following specifications shall be met when the capacitors are restored to 20 °C after DC voltage plus rated ripple current is applied for a specified period of time at 105°C. ØD≤6.3, 3000H；ØD=8, 4000H;ØD=10, 5000H;ØD≥12.5, 6000H										
	Capacitance Change	≤±25% of the initial value									
	D . F. (tanδ)	≤200% of the initial specified value									
	Leakage Current	≤The initial specified value									
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after leaving them under no load at 105°C for 1,000 hours .										
	Capacitance Change	≤±20% of the initial value									
	D . F. (tanδ)	≤200% of the initial specified value									
	Leakage Current	≤200% of the initial specified value									

Diagram of Dimensions(mm)



ØD	5	6.3	8		10	13.0	16.0	18
Ød	0.5	0.5	0.5	0.6	0.6	0.6	0.8	0.8
F±0.5	2	2.5	3.5		5.0	5.0	7.5	7.5
ØD'	ØD+0.5max.							
L'	L+2max.							

Multiplier for Ripple Current vs. Frequency:

CAP(uF)\Freq.(Hz)	120	1k	10k	100k
Cap.<220	0.40	0.75	0.90	1.00
220≤Cap<680	0.50	0.85	0.94	1.00
680≤Cap<2200	0.60	0.87	0.95	1.00
2200≤Cap<4700	0.75	0.90	0.95	1.00
Cap ≥4700	0.85	0.95	0.98	1.00

Standard Ratings

Voltage（Code）		6.3V				10V			
Cap (μF)	Code	Case Size	tanδ	Max ESR	Ripple current	Case Size	tanδ	Max ESR	Ripple current
100	107					5x11	0.14	0.29	300
						6.3x9	0.14	0.37	270
150	157	5x11	0.15	0.29	300				
		6.3x9	0.15	0.37	270				
220	227	6.3x11	0.15	0.205	377	6.3x11	0.14	0.12	455
		8x9	0.15	0.26	377	8x9	0.14	0.15	408
330	337	6.3x11	0.15	0.12	455				
		8x9	0.15	0.15	408				
470	477	8x11	0.15	0.09	632	8x11	0.14	0.071	810
		10x9	0.15	0.12	565	10x9	0.14	0.092	720
680	687					8x16	0.14	0.055	1046
						10x13	0.14	0.052	1080
820	827	8x16	0.15	0.055	1045				
1000	108	8x16	0.15	0.052	1000	8x20	0.14	0.04	1300
						10x16	0.14	0.037	1480
1200	128	8x20	0.15	0.04	1300	10x20	0.14	0.022	1870
		10x16	0.15	0.037	1480				
1500	158	10x20	0.15	0.022	1870	10x20	0.14	0.021	2220
2200	228	10x20	0.17	0.021	2220	13x20	0.16	0.02	2410
2700	278	10x25	0.17	0.02	2250				
3300	338	13x20	0.19	0.02	2410	13x25	0.18	0.017	2820
3900	398	13x25	0.19	0.017	2820	13x30	0.18	0.015	3340
4700	478	13x30	0.21	0.015	3340	13x35	0.20	0.014	3450
5600	568	13x35	0.23	0.014	3400	16x25	0.22	0.015	3510
		16x20	0.23	0.017	3190				
6800	688	16x25	0.25	0.015	3510				

Maximum Allowable Ripple Current (mArms) at 105˚C 100kHz
Maximum Impedance (Ω) at 20˚C 100kHz

Case Size ΦD x L (mm)

Standard Ratings

Voltage（Code）		16V				25V			
Cap (μF)	Code	Case Size	tanδ	Max ESR	Ripple current	Case Size	tanδ	Max ESR	Ripple current
47	476					5x11	0.10	0.29	300
						6.3x9	0.10	0.37	270
56	566	5x11	0.12	0.29	300				
		6.3x9	0.12	0.37	270				
100	107					6.3x11	0.10	0.12	455
						8x9	0.10	0.15	408
120	127	6.3x11	0.12	0.12	455				
		8x9	0.12	0.15	408				
150	157	6.3x11	0.12	0.096	632				
		8x9	0.12	0.12	565				
220	227	6.3x12	0.12	0.084	721	8x11	0.10	0.071	810
		8x9	0.12	0.1	650	10x9	0.10	0.092	720
330	337	8x11	0.12	0.071	810	8x16	0.10	0.055	1045
		10x9	0.12	0.092	720	10x13	0.10	0.052	1080
390	397					8x20	0.10	0.044	1236
470	477	8x16	0.12	0.055	1045	10x16	0.10	0.037	1480
		10x13	0.12	0.052	1080				
560	567					10x16	0.10	0.03	1675
680	687	8x20	0.12	0.04	1300	10x20	0.10	0.022	1870
		10x16	0.12	0.04	1480				
820	827					10x25	0.10	0.021	2200
1000	108	10x20	0.12	0.022	1870	13x20	0.10	0.019	2550
1200	128	10x25	0.12	0.021	2200				
1500	158	13x20	0.12	0.02	2410	13x25	0.10	0.017	2820
1800	187					13x30	0.10	0.015	3340
						16x20	0.10	0.017	3190
2200	228	13x25	0.14	0.017	2820	13x35	0.12	0.014	3450
2700	278	13x30	0.14	0.015	3340	16x25	0.12	0.015	3510
		16x20	0.14	0.017	3190				
3300	338	13x35	0.16	0.014	3450				
		16x25	0.16	0.016	3350				
3900	398	16x25	0.16	0.015	3510				

Maximum Allowable Ripple Current (mArms) at 105˚C 100kHz
Maximum Impedance (Ω) at 20˚C 100kHz

Case Size ΦD x L (mm)

Standard Ratings

Voltage（Code）		35V				50V			
Cap (μF)	Code	Case Size	tanδ	Max ESR	Ripple current	Case Size	tanδ	Max ESR	Ripple current
10	106					5x11	0.08	2.0	88
22	226					5x11	0.08	0.33	288
						6.3x9	0.08	0.43	260
33	336	5x11	0.10	0.29	300				
		6.3x9	0.10	0.37	270				
56	566	6.3x11	0.10	0.12	455	6.3x11	0.08	0.13	435
		8x9	0.10	0.15	408	8x9	0.08	0.17	390
100	107	8x11	0.10	0.095	632	8x11	0.08	0.073	774
		10x9	0.10	0.12	565	8x12	0.08	0.25	447
						10x9	0.08	0.095	695
120	127					8x16	0.08	0.06	1000
150	157	8x11	0.10	0.071	810	10x13	0.08	0.06	1029
		10x9	0.10	0.092	720				
180	187					8x20	0.08	0.045	1240
220	227	8x16	0.10	0.055	1045	10x16	0.08	0.041	1420
		10x13	0.10	0.052	1080				
270	277	8x20	0.10	0.04	1300	10x20	0.08	0.029	1630
330	337	10x16	0.10	0.052	1080	10x25	0.08	0.027	1920
470	477	10x20	0.10	0.022	1870	13x20	0.08	0.026	2100
560	567	10x25	0.10	0.021	2200	13x25	0.08	0.022	2460
680	687	13x20	0.10	0.02	2410	13x30	0.08	0.02	2910
820	827					13x35	0.08	0.018	3010
						16x20	0.08	0.022	2780
1000	108	13x25	0.10	0.017	2820	16x25	0.08	0.02	3060
1200	128	13x30	0.10	0.015	3340				
		16x20	0.10	0.017	3190				
1500	158	13x35	0.10	0.014	3450				

Maximum Allowable Ripple Current (mArms) at 105˚C 100kHz Case Size ΦD x L (mm)

Maximum Impedance (Ω) at 20˚C 100kHz

Maximum Allowable Ripple Current (mArms) at 105˚C 100kHz Case Size ΦD x L (mm)

Maximum Impedance (Ω) at 20˚C 100kHz

Standard Ratings

Voltage（Code）		63V				80V			
Cap (μF)	Code	Case Size	tanδ	Max ESR	Ripple current	Case Size	tanδ	Max ESR	Ripple current
10	106	5x11	0.08	1.3	63				
15	156	5x11	0.08	0.88	165				
		6.3x9	0.08	1.14	148				
33	336	6.3x11	0.08	0.35	265				
		8x9	0.08	0.45	235				
56	566	8x11	0.08	0.22	500				
		10x9	0.08	0.28	450				
68	686					10x13	0.08	0.17	480
82	826	8x16	0.08	0.16	665				
		10x13	0.08	0.11	690				
100	107	8x12	0.08	0.34	367	10x16	0.08	0.11	600
120	127	8x20	0.08	0.12	820	10x20	0.08	0.084	800
		10x16	0.08	0.076	950				
150	157					10x25	0.08	0.069	900
						13x16	0.08	0.11	750
180	187	10x20	0.08	0.056	1150				
		13x16	0.08	0.072	1150				
220	227	10x25	0.08	0.046	1350	13x20	0.08	0.062	1100
270	277	13x20	0.08	0.041	1500				
330	337					13x25	0.08	0.047	1250
						16x20	0.08	0.048	1350
390	397	13x25	0.08	0.031	1900	13x30	0.08	0.042	1500
470	477	13x30	0.08	0.028	2300	13x35	0.08	0.036	1650
		16x20	0.08	0.032	2000	16x25	0.08	0.038	1700
						18x20	0.08	0.045	1500
560	567	13x35	0.08	0.024	2500	13x40	0.08	0.032	1800
680	687	13x40	0.08	0.021	2800	16x30	0.08	0.032	1850
		16x25	0.08	0.025	2600	18x25	0.08	0.036	1750
		18x20	0.08	0.03	2500				
820	827	16x30	0.08	0.021	2850	16x35	0.08	0.029	2000
		18x25	0.08	0.024	2800	18x30	0.08	0.03	1900
1000	108	16x35	0.08	0.019	2900	16x40	0.08	0.027	2200
						18x35	0.08	0.027	2200
1200	128	16x40	0.08	0.018	3400	18x40	0.08	0.026	2700
		18x30	0.08	0.02	3300				
1500	158	18x35	0.08	0.018	3400				
1800	188	18x40	0.08	0.017	3500				

Maximum Allowable Ripple Current (mArms) at 105˚C 100kHz

Case Size ΦD x L (mm)

Maximum Impedance (Ω) at 20˚C 100kHz

Standard Ratings

Voltage（Code）		100V				120V			
Cap (μF)	Code	Case Size	tanδ	Max ESR	Ripple current	Case Size	tanδ	Max ESR	Ripple current
6.8	685	5x11	0.08	1.4	125				
		6.3x9	0.08	1.8	110				
10	106	6.3x11	0.08	0.68	115	6.3x11	0.12	5.5	80
15	156	6.3x11	0.08	0.57	205	6.3x12	0.12	4.5	100
		8x9	0.08	0.74	180				
18	186					8x9	0.12	4.0	120
27	276	8x12	0.08	0.36	355	8x12	0.12	3.5	130
		10x9	0.08	0.47	320				
33	336					8x16	0.12	3.0	220
						10x13	0.12	3.0	220
39	396	8x16	0.08	0.25	450				
47	476	10x13	0.08	0.17	480	8x20	0.12	2.5	270
						10x16	0.12	2.5	270
56	566	8x20	0.08	0.19	565	10x16	0.12	2.2	285
68	686	10x16	0.08	0.11	600	10x16	0.12	2.0	285
82	826	10x20	0.08	0.084	800	10x20	0.12	1.8	300
100	107	13x16	0.08	0.11	750	10x25	0.12	1.5	380
120	127	10x25	0.08	0.069	900	13x20	0.12	1.3	520
150	157	13x20	0.08	0.062	1100	13x25	0.12	1.0	570
220	227	13x25	0.08	0.047	1250	13x30	0.12	0.75	700
		16x20	0.08	0.048	1350	16x20	0.12	0.75	700
270	277	13x30	0.08	0.042	1500	16x25	0.12	0.55	800
						18x20	0.12	0.55	800
330	337	13x35	0.08	0.036	1650	16x30	0.12	0.42	860
		16x25	0.08	0.038	1700	18x25	0.12	0.42	860
		18x20	0.08	0.045	1500				
390	397	13x40	0.08	0.032	1800				
470	477	16x30	0.08	0.032	1850	16x40	0.12	0.30	960
		18x25	0.08	0.036	1750	18x30	0.12	0.30	960
560	567	16x35	0.08	0.029	2000				
		18x30	0.08	0.03	1900				
680	687	16x40	0.08	0.027	2200				
		18x35	0.08	0.027	2200				
820	827	18x40	0.08	0.026	2700				

Maximum Allowable Ripple Current (mArms) at 105˚C 100kHz

Case Size ΦD x L (mm)

Maximum Impedance (Ω) at 20˚C 100kHz