

ERG series

■ 特性 Features

- 负载寿命: 105°C 2000-4000 小时 Load life: 2000-4000 hours at 105 °C
- 通过降低高频范围内的 ESR, 实现了高纹波电流 By reducing ESR in the high-frequency range, high ripple current has been achieved.
- 符合 RoHS 标准 Compliant with RoHS standards



■ 仕様 Specifications

项目 Item	性能 Performance												
使用温度范围 Operating Temperature Range	-40℃~+105℃(6.3~100V)							-25℃~+105℃(160~450V)					
额定电压范围 Rated Voltage Range	6.3~450V												
额定静电容量范围 Capacitance Range	1~6800μF												
额定静电容量容许差 Capacitance Tolerance	±20%												
漏电流 Leakage Current	施加额定电压 2 分钟后 I≤0.01CV 或 3μA（以较大值为准） After 2 minutes application of rated voltage. I≤0.01CV or 3μA(whichever is greater)												
损耗角正切值 Dissipation Factor (120Hz, 20℃)	对于额定经典容量超过 1000μF 的产品，其静电容量每增加 1000μF，则损失角正切在上表值的基础上加 0.02。 When nominal capacitance is over 1000μF,tan δ shall be added 0.02 to the listed value with increase of every 1000μF.												
	额定电压 Rated Voltage (V)	6.3	10	16	25	35	50	63	100~120	160~300	350~450		
	tan δ	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08	0.20	0.24		
耐久性 Endurance	在 105℃下，连续施加额定电压达到规定时间后，满足以下项目 After continuously applying the rated voltage for the specified time at 105 °C,The capacitors shall meet the following requirements.												
	静电容量变化率 Capacitance Change		初始值的±20%以内 Within 20% of the initial value									ΦD Load life	
	损失角正切率 Dissipation Factor		不超过规定值的 200% Not more than 200% of the specified value									Φ5-6.3 2000	
	漏电流 Leakage Current		规定值以下 Not more than the specified value									Φ8-10 3000	
												Φ12.5~ 4000	

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■ 仕様 Specifications

項目 Item	性能 Performance										
高温儲存 Shelf Life	在 105°C 下无负荷放置 1000 小时后, 电容器应满足以下要求 After Leaving capacitors under no load at 105°C for 1000hrs, The capacitors shall meet the following requirements.										
	静电容量变化率 Capacitance Change	初始值的±20%以内 Within 20% of the initial value									
	损失角正切率 Dissipation Factor(tan δ)	不超过规定值的 200% Not more than 200% of the specified value									
	漏损电流 Leakage Current	不超过规定值的 200% Not more than the specified value Shelf Life									
低温特性 Low Temperature Stability (阻抗比) impedance Ratio(MAX)	额定电压 Rated Voltage (V)	6.3	10	16	25	35	50	63	100~120	160~300	350~450
	Z(-25°C)/Z(+20°C)	4	3	2	2	2	2	2	2	3	5
	Z(-40°C)/Z(+20°C)	8	6	4	3	3	3	3	3	-	-
其他 Other	JISC-5141 EIAJ RC-2372										

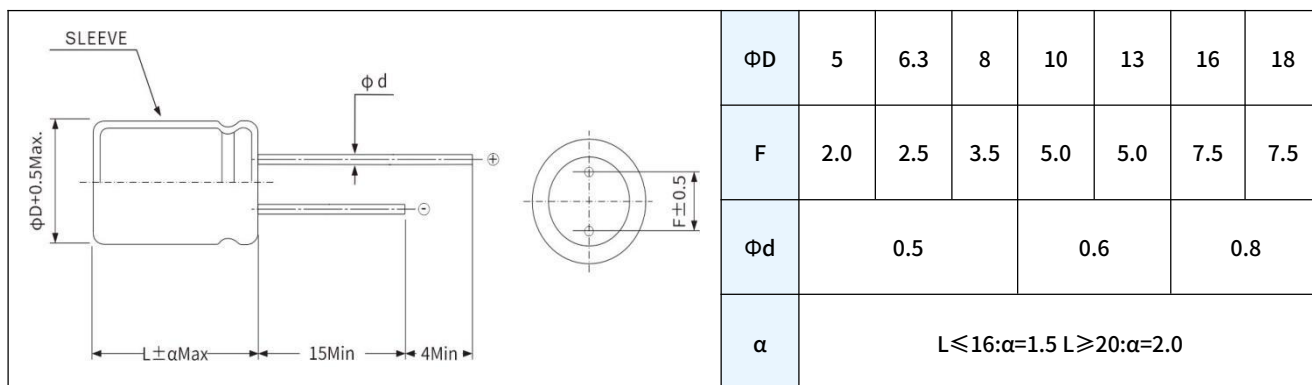
■ 纹波电流速查表 Ripple Current Quick Reference Table:

Cap(μF)	Frequency(Hz)			
	120	1K	10K	100K
≤180	0.40	0.75	0.90	1.00
220~560	0.50	0.85	0.94	1.00
680~1800	0.60	0.87	0.95	1.00
2200~3900	0.75	0.90	0.95	1.00
≥4700	0.85	0.95	0.98	1.00

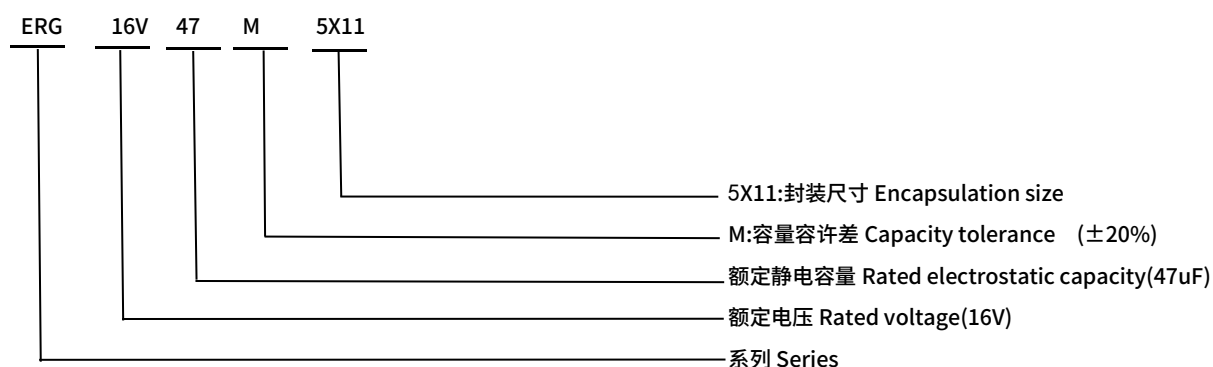
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尺寸图 Dimensions

(Unit:mm)



品号编码体系 Part Number Coding System (Example: 16V 47μF)



注释：型号中 R 表示小数点，如 4R7 表示 4.7μF

Note: "R" in the model number denotes a decimal point (e.g., 4R7 = 4.7μF)

电气特性 Electrical Characteristics

额定电压 Rated Voltage(V)	额定静电容量 Rated Capacitance(μF)	尺寸 Dimensions ΦDXL(mm)	额定纹波电流 Rated Ripple Current (mA,105°C,120Hz)	阻抗 Impedance (Ω,20°C,100KHz)	tan δ (120Hz,20°C)	品号 Part Number
6.3	100	5X11	210	0.58	0.22	ERG6.3V100M5X11
	220	6.3X11	340	0.22	0.22	ERG6.3V220M6X11
	330	6.3X11	340	0.22	0.22	ERG6.3V330M6X11
	470	8X12	640	0.13	0.22	ERG6.3V470M8X12
	680	8X12	760	0.10	0.22	ERG6.3V680M8X12
	1000	8X12	810	0.08	0.22	ERG6.3V1000M8X12
	1000	10X13	865	0.08	0.22	ERG6.3V1000M10X13
	1500	8X20	1050	0.044	0.22	ERG6.3V1500M8X20

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额定电压 Rated Voltage(V)	额定静电容量 Rated Capacitance(μF)	尺寸 Dimensions ΦDXL(mm)	额定纹波电流 Rated Ripple Current (mA,105°C,120Hz)	阻抗 Impedance (Ω,20°C,100KHz)	tan δ (120Hz,20°C)	品号 Part Number
6.3	1500	10X16	1240	0.046	0.22	ERG6.3V1500M10X16
6.3	2200	10X20	1460	0.042	0.22	ERG6.3V2200M10X20
6.3	3300	10X25	2050	0.032	0.22	ERG6.3V3300M10X25
6.3	3300	13X21	1900	0.035	0.22	ERG6.3V3300M13X21
6.3	4700	10X30	2250	0.026	0.22	ERG6.3V4700M10X30
6.3	4700	13X21	2040	0.035	0.22	ERG6.3V4700M13X21
6.3	5600	13X25	2450	0.022	0.22	ERG6.3V5600M13X25
6.3	6800	13X25	2720	0.020	0.22	ERG6.3V6800M13X25
10	100	5X11	210	0.58	0.19	ERG10V100M5X11
10	220	6.3X11	340	0.22	0.19	ERG10V220M6X11
10	330	6.3X11	390	0.22	0.19	ERG10V330M6X11
10	470	6.3X11	450	0.18	0.19	ERG10V470M6X11
10	470	8X12	640	0.13	0.19	ERG10V470M8X12
10	680	8X14	820	0.087	0.19	ERG10V680M8X14
10	1000	8X20	1050	0.069	0.19	ERG10V1000M8X20
10	1000	10X16	1210	0.06	0.19	ERG10V1000M10X16
10	1500	10X16	1380	0.055	0.19	ERG10V1500M10X16
10	1500	10X20	1560	0.042	0.19	ERG10V1500M10X20
10	2200	10X20	1650	0.038	0.19	ERG10V2200M10X20
10	2200	10X25	1840	0.035	0.19	ERG10V2200M10X25
10	3300	10X30	2140	0.026	0.19	ERG10V3300M10X30
10	3300	13X21	2060	0.035	0.19	ERG10V3300M13X21
10	4700	13X25	2355	0.028	0.19	ERG10V4700M13X25
10	5600	16X25	2552	0.028	0.19	ERG10V5600M16X25
16	6800	16X25	2640	0.024	0.19	ERG10V6800M16X25
16	47	5X11	210	0.58	0.16	ERG16V47M5X11
16	100	5X11	210	0.58	0.16	ERG16V100M5X11
16	220	6.3X7	300	0.22	0.16	ERG16V220M6X7
16	220	6.3X11	340	0.22	0.16	ERG16V220M6X11
16	330	8X12	640	0.13	0.16	ERG16V330M8X12
16	470	6X12	690	0.12	0.16	ERG16V470M6X12
16	470	8X12	705	0.10	0.16	ERG16V470M8X12
16	470	8X14	780	0.087	0.16	ERG16V470M8X14
16	680	8X16	1020	0.069	0.16	ERG16V680M8X16

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额定电压 Rated Voltage(V)	额定静电容量 Rated Capacitance(μF)	尺寸 Dimensions ΦDXL(mm)	额定纹波电流 Rated Ripple Current (mA,105°C,120Hz)	阻抗 Impedance (Ω,20°C,100KHz)	tan δ (120Hz,20°C)	品号 Part Number
16	680	10X13	1050	0.070	0.16	ERG16V680M10X13
16	1000	8X20	1230	0.058	0.16	ERG16V1000M8X20
16	1000	10X16	1305	0.052	0.16	ERG16V1000M10X16
16	1000	10X20	1400	0.046	0.16	ERG16V1000M10X20
16	1500	10X20	1780	0.040	0.16	ERG16V1500M10X20
16	1500	13X21	1900	0.035	0.16	ERG16V1500M13X21
16	2200	10X25	1980	0.035	0.16	ERG16V2200M10X25
16	2200	13X21	2095	0.030	0.16	ERG16V2200M13X21
16	3300	10X32	2372	0.022	0.16	ERG16V3300M10X32
16	3300	13X25	2510	0.030	0.16	ERG16V3300M13X25
16	4700	16X30	3029	0.022	0.16	ERG16V4700M16X30
16	4700	18X25	2771	0.024	0.16	ERG16V4700M18X25
16	5600	16X30	2875	0.020	0.16	ERG16V5600M16X30
16	6800	16X35	3720	0.017	0.16	ERG16V6800M16X35
25	10	5X11	100	3.3	0.14	ERG25V10M5X11
25	47	5X11	210	0.58	0.14	ERG25V47M5X11
25	100	6X7	205	0.6	0.14	ERG25V100M6X7
25	100	6.3X11	340	0.22	0.14	ERG25V100M6X11
25	220	6.3X11	510	0.13	0.14	ERG25V220M6X11
25	220	8X12	640	0.13	0.14	ERG25V220M8X12
25	330	8X12	760	0.087	0.14	ERG25V330M8X12
25	330	8X16	840	0.087	0.14	ERG25V330M8X16
25	470	8X14	905	0.069	0.14	ERG25V470M8X14
25	470	10X13	1120	0.060	0.14	ERG25V470M10X13
25	680	10X20	1400	0.046	0.14	ERG25V680M10X20
25	1000	10X16	1600	0.040	0.14	ERG25V1000M10X16
25	1000	10X20	1720	0.035	0.14	ERG25V1000M10X20
25	1000	13X21	1900	0.035	0.14	ERG25V1000M13X21
25	1500	13X21	2052	0.030	0.14	ERG25V1500M13X21
25	2200	13X25	2560	0.022	0.14	ERG25V2200M13X25
25	3300	16X30	3029	0.022	0.14	ERG25V3300M16X30
25	3300	18X25	2771	0.022	0.14	ERG25V3300M18X25
25	4700	16X35	3260	0.019	0.14	ERG25V4700M16X35
25	5600	16X35	3482	0.017	0.14	ERG25V5600M16X35

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额定电压 Rated Voltage(V)	额定静电容量 Rated Capacitance(μF)	尺寸 Dimensions ΦDXL(mm)	额定纹波电流 Rated Ripple Current (mA,105°C,120Hz)	阻抗 Impedance (Ω,20°C,100KHz)	tan δ (120Hz,20°C)	品号 Part Number
25	6800	18X35	3960	0.015	0.14	ERG25V6800M18X35
35	22	5X11	210	0.58	0.12	ERG35V22M5X11
35	33	5X11	210	0.58	0.12	ERG35V33M5X11
35	47	5X11	260	0.38	0.12	ERG35V47M5X11
35	47	6.3X11	340	0.22	0.12	ERG35V47M6X11
35	100	8X12	640	0.13	0.12	ERG35V100M8X12
35	220	8X12	680	0.10	0.12	ERG35V220M8X12
35	220	8X14	820	0.09	0.12	ERG35V220M8X14
35	330	8X20	1050	0.069	0.12	ERG35V330M8X20
35	330	10X13	980	0.072	0.12	ERG35V330M10X13
35	470	8X16	1050	0.07	0.12	ERG35V470M8X16
35	470	10X13	1230	0.046	0.12	ERG35V470M10X13
35	470	10X16	1326	0.046	0.12	ERG35V470M10X16
35	470	10X20	1400	0.046	0.12	ERG35V470M10X20
35	680	10X16	1500	0.042	0.12	ERG35V680M10X16
35	680	10X20	2000	0.035	0.12	ERG35V680M10X20
35	680	13X21	1780	0.035	0.12	ERG35V680M13X21
35	1000	10X20	2190	0.030	0.12	ERG35V1000M10X20
35	1000	10X25	2190	0.030	0.12	ERG35V1000M10X25
35	1000	13X21	2235	0.030	0.12	ERG35V1000M13X21
35	1500	13X25	2650	0.022	0.12	ERG35V1500M13X25
35	2200	16X30	3498	0.022	0.12	ERG35V2200M16X30
35	2200	18X25	3201	0.024	0.12	ERG35V2200M18X25
35	3300	18X30	4090	0.018	0.12	ERG35V3300M18X30
35	4700	18X35	4367	0.015	0.12	ERG35V4700M18X35
50	1	5X11	180	2.4	0.10	ERG50V1R5M5X11
50	2.2	5X11	180	1.3	0.10	ERG50V2R2M5X11
50	3.3	5X11	180	1.3	0.10	ERG50V3R3M5X11
50	4.7	5X11	180	1.3	0.10	ERG50V4R7M5X11
50	10	5X11	180	1.3	0.10	ERG50V10M5X11
50	22	5X11	180	1.3	0.10	ERG50V22M5X11
50	33	6.3X11	295	0.3	0.10	ERG50V33M6X11
50	47	6.3X11	295	0.3	0.10	ERG50V47M6X11
50	100	8X12	680	0.12	0.10	ERG50V100M8X12

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额定电压 Rated Voltage(V)	额定静电容量 Rated Capacitance(μF)	尺寸 Dimensions ΦDXL(mm)	额定纹波电流 Rated Ripple Current (mA,105°C,120Hz)	阻抗 Impedance (Ω,20°C,100KHz)	tan δ (120Hz,20°C)	品号 Part Number
50	220	10X16	1050	0.06	0.10	ERG50V220M10X16
50	330	10X16	1290	0.055	0.10	ERG50V330M10X16
50	330	10X20	1460	0.05	0.10	ERG50V330M10X20
50	470	10X20	1560	0.043	0.10	ERG50V470M10X20
50	470	13X21	1720	0.034	0.10	ERG50V470M13X21
50	680	13X21	2180	0.06	0.10	ERG50V680M13X21
50	1000	13X25	2640	0.021	0.10	ERG50V1000M13X25
50	1000	1625	2555	0.025	0.10	ERG50V1000M1625
50	1500	16X30	3040	0.019	0.10	ERG50V1500M16X30
50	2200	18X30	3410	0.017	0.10	ERG50V2200M18X30
50	2200	18X35	3680	0.017	0.10	ERG50V2200M18X35
50	3300	18X35	4200	0.015	0.10	ERG50V3300M18X35
63	10	5X11	95	2.5	0.09	ERG63V10M5X11
63	22	6.3X11	115	1.2	0.09	ERG63V22M6X11
63	33	6.3X11	115	1.2	0.09	ERG63V33M6X11
63	47	8X12	232	0.63	0.09	ERG63V47M8X12
63	100	8X16	300	0.45	0.09	ERG63V100M8X16
63	100	10X13	288	0.43	0.09	ERG63V100M10X13
63	220	10X16	466	0.21	0.09	ERG63V220M10X16
63	220	10X20	466	0.21	0.09	ERG63V220M10X20
63	220	10X25	531	0.20	0.09	ERG63V220M10X25
63	220	13X21	690	0.16	0.09	ERG63V220M13X21
63	330	10X20	580	0.15	0.09	ERG63V330M10X20
63	470	13X21	860	0.10	0.09	ERG63V470M13X21
63	680	13X25	980	0.083	0.09	ERG63V680M13X25
63	1000	16X25	1380	0.054	0.09	ERG63V1000M16X25
63	1500	18X30	1620	0.040	0.09	ERG63V1500M18X30
63	2200	18X35	1890	0.035	0.09	ERG63V2200M18X35
100	6.8	5X11	55	2.3	0.08	ERG100V6.8M5X11
100	10	6.3X11	105	2.0	0.08	ERG100V10M6X11
100	22	8X12	165	1.0	0.08	ERG100V22M8X12
100	33	8X14	210	0.8	0.08	ERG100V33M8X14
100	47	8X16	288	0.43	0.08	ERG100V47M8X16
100	47	10X13	288	0.43	0.08	ERG100V47M10X13

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额定电压 Rated Voltage(V)	额定静电容量 Rated Capacitance(μF)	尺寸 Dimensions ΦDXL(mm)	额定纹波电流 Rated Ripple Current (mA,105°C,120Hz)	阻抗 Impedance (Ω,20°C,100KHz)	tan δ (120Hz,20°C)	品号 Part Number
100	47	8X16	288	0.43	0.08	ERG100V47M8X16
100	47	10X13	288	0.43	0.08	ERG100V47M10X13
100	68	10X16	375	0.31	0.08	ERG100V68M10X16
100	100	10X20	490	0.20	0.08	ERG100V100M10X20
100	220	13X21	760	0.12	0.08	ERG100V220M13X21
100	220	13X25	810	0.12	0.08	ERG100V220M13X25
100	330	16X25	1380	0.08	0.08	ERG100V330M16X25
100	470	16X30	1740	0.045	0.08	ERG100V470M16X30
100	680	18X30	1890	0.04	0.08	ERG100V680M18X30
100	1000	18X40	1920	0.035	0.08	ERG100V1000M18X40
160	1	5X11	25	19.6	0.2	ERG160V1RM5X11
160	2.2	5X11	35	13	0.2	ERG160V2R2M5X11
160	3.3	6.3X11	50	10.7	0.2	ERG160V3R3M6X11
160	4.7	6.3X11	55	10.4	0.2	ERG160V4R7M6X11
160	10	8X12	80	6.7	0.2	ERG160V10M8X12
160	22	10X13	180	3.25	0.2	ERG160V22M10X13
160	33	10X20	210	2.75	0.2	ERG160V33M10X20
160	47	13X21	320	2.28	0.2	ERG160V47M13X21
160	68	13X21	375	1.4	0.2	ERG160V68M13X21
160	100	16X25	500	1.18	0.2	ERG160V100M16X25
160	220	16X35	820	0.48	0.2	ERG160V220M16X35
160	330	18X35	950	0.4	0.2	ERG160V330M18X35
200	1	6.3X11	45	19.4	0.2	ERG200V1RM6X11
200	2.2	6.3X11	55	13.0	0.2	ERG200V2R2M6X11
200	3.3	6.3X11	60	10.6	0.2	ERG200V3R3M6X11
200	4.7	6.3X11	65	8.88	0.2	ERG200V4R7M6X11
200	6.8	8X12	85	6.78	0.2	ERG200V6R8M8X12
200	10	8X12	95	5.05	0.2	ERG200V10M8X12
200	22	10X16	195	3.0	0.2	ERG200V22M10X16
200	33	10X20	265	1.55	0.2	ERG200V33M10X20
200	47	13X21	360	1.28	0.2	ERG200V47M13X21
200	68	13X21	405	1.13	0.2	ERG200V68M13X21
200	100	16X25	700	0.98	0.2	ERG200V100M16X25
200	220	16X30	900	0.35	0.2	ERG200V220M16X30

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额定电压 Rated Voltage(V)	额定静电容量 Rated Capacitance(μF)	尺寸 Dimensions ΦDXL(mm)	额定纹波电流 Rated Ripple Current (mA,105°C,120Hz)	阻抗 Impedance (Ω,20°C,100KHz)	tan δ (120Hz,20°C)	品号 Part Number
200	330	18X40	1100	0.28	0.2	ERG200V330M18X40
250	1	6.3X11	50	16.4	0.2	ERG250V1M6X11
250	2.2	6.3X11	60	10.3	0.2	ERG250V2R2M6X11
250	3.3	6.3X11	65	9.63	0.2	ERG250V3R3M6X11
250	4.7	8X12	70	7.13	0.2	ERG250V4R7M8X12
250	6.8	10X13	95	4.65	0.2	ERG250V6R8M10X13
250	10	10X13	125	3.5	0.2	ERG250V10M10X13
250	22	10X20	185	3.25	0.2	ERG250V22M10X20
250	33	13X21	260	2.25	0.2	ERG250V33M13X21
250	47	13X25	405	1.13	0.2	ERG250V47M13X25
250	68	13X25	450	0.95	0.2	ERG250V68M13X25
250	100	16X25	750	0.75	0.2	ERG250V100M16X25
250	220	18X35	860	0.33	0.2	ERG250V220M18X35
350	1	6.3X11	55	15.9	0.24	ERG300V1R6X11
350	2.2	6.3X11	65	10.1	0.24	ERG300V2R2M6X11
350	3.3	6.3X11	70	8.8	0.24	ERG300V3R3M6X11
350	4.7	8X12	95	5.68	0.24	ERG300V4R7M8X12
350	6.8	10X13	105	4.12	0.24	ERG300V6R8M10X13
350	10	10X13	145	3.38	0.24	ERG300V10M10X13
350	22	10X20	200	3.13	0.24	ERG300V22M10X20
350	33	13X21	290	2.15	0.24	ERG300V33M13X21
350	47	13X25	415	1.55	0.24	ERG300V47M13X25
350	68	13X25	465	1.40	0.24	ERG300V68M13X25
350	100	18X32	500	1.38	0.24	ERG300V100M18X32
400	1	6.3X11	32	41.3	0.24	ERG400V1R6X11
400	2.2	8X12	45	24	0.24	ERG400V2R2M8X12
400	3.3	8X12	65	12.5	0.24	ERG400V3R3M8X12
400	4.7	10X13	75	12.1	0.24	ERG400V4R7M10X13
400	6.8	10X16	105	8.88	0.24	ERG400V6R8M10X16
400	10	10X20	115	8.30	0.24	ERG400V10M10X20
400	22	13X21	145	6.55	0.24	ERG400V22M13X21
400	33	16X25	277	3.03	0.24	ERG400V33M16X25
400	47	18X20	315	2.3	0.24	ERG400V47M18X20
400	68	16X26	360	1.88	0.24	ERG400V68M16X26

ERG series

额定电压 Rated Voltage(V)	额定静电容量 Rated Capacitance(μF)	尺寸 Dimensions ΦDXL(mm)	额定纹波电流 Rated Ripple Current (mA,105°C,120Hz)	阻抗 Impedance (Ω,20°C,100KHz)	tan δ (120Hz,20°C)	品号 Part Number
400	68	18X25	385	1.88	0.24	ERG400V68M18X25
400	100	18X35	485	1.3	0.24	ERG400V100M18X35
450	1.0	6.3X11	28	43.4	0.24	ERG450V1M6X11
450	2.2	8X12	38	25.6	0.24	ERG450V2R2M8X12
450	3.3	8X12	55	14.1	0.24	ERG450V3R3M8X12
450	4.7	10X13	65	12.5	0.24	ERG450V4R7M10X13
450	6.8	10X16	90	10.6	0.24	ERG450V6R8M10X16
450	10	10X16	95	9.45	0.24	ERG450V10M10X16
450	10	10X20	100	9.45	0.24	ERG450V10M10X20
450	22	13X25	125	7.63	0.24	ERG450V22M13X25
450	33	16X25	205	5.5	0.24	ERG450V33M16X25
450	47	18X25	325	2.55	0.24	ERG450V47M18X25
450	68	18X30	405	1.95	0.24	ERG450V68M18X30
450	100	18X40	495	1.5	0.24	ERG450V100M18X40