



Distributeur : JBG-METAFIX

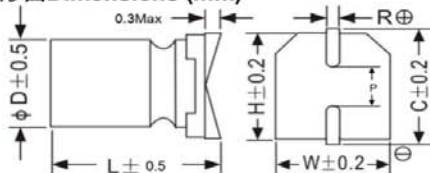
MB Series

- Low ESR, High ripple, miniaturized
- SMD type: lead free reflow soldering condition at 260°C peak correspondence
- RoHS Compliant

◆ 规格表 Specifications

项目Items	特性参数Characteristics			
使用温度范围 Category Temperature Range	-55 ~ +105℃			
额定工作电压范围 Rated Voltage Range	2.5 ~ 100V			
静电容量允许偏差 Capacitance tolerance	±20%(M) (at 20℃,120Hz)			
漏电流 Leakage Current	施加额定工作电压2分钟后读数, 小于或等于规格值 (at 20℃) Less than or equal to the specified value. After 2 minutes application of rated Voltage at 20℃		2.5~25V ≤0.2CV 或500μA(取大值)	35~100V ≤0.1CV 或299μA(取大值)
损耗角正切值tanδ Dissipation Factor	Rated voltage (V)	2.5~6.3	10~100	(at 20℃,120Hz)
	tanδ (Max.)	0.08	0.12	
温度特性 Low Temperature Characteristics (Max.Impedance Ratio)	Z(-25℃)/Z(+20℃)	≦ 1.25		(100KHz)
	Z(-55℃)/Z(+20℃)	≦ 1.25		
耐久性 Endurance	105℃施加额定工作电压2000小时, 恢复到20℃后, 产品性能应满足以下要求 The specifications listed below shall be satisfied when the capacitors are restored to 20℃ after application of rated voltage for 2000 hours at 105℃.			
	Appearance	No significant damage		
	Capacitance change	≦ ±20% of the initial value		
	D.F.(tanδ)	≦ 150% of the specified value		
	ESR	≦ 150% of the specified value		
	Leakage current	≦ The specified value		
耐湿负荷特性 Damp Heat (Steady State)	在60℃ 温度, 湿度90%~95%RH的环境中, 施加额定电压1000小时后, 恢复到20℃后, 产品性能应满足以下要求 The specifications listed below shall be satisfied when the capacitors are restored to 20℃ after application of rated voltage for 1000 hours at 60℃,90%~ 95% RH.			
	Appearance	No significant damage		
	Capacitance change	≦ ±20% of the initial value		
	D.F.(tanδ)	≦ 150% of the specified value		
	ESR	≦ 150% of the specified value		
	Leakage current	≦ The specified value		
浪涌电压特性 (Surge Voltage)	浪涌电压=额定电压× 1.15(V) Surge Voltage=Rated voltage × 1.15(V) 在105℃环境中, 按充电30秒; 放电5分30秒, 连续施加浪涌电压1000次(Rc=1kΩ), 待恢复测试, 应满足以下要求 The capacitors shall be subjected to 1000 cycles each consisting of charge with the surge voltages specified at 105℃ for 30 seconds through a protective resistor (Rc=1kΩ) and discharge for 5 minutes 30 seconds.			
	Appearance	No significant damage		
	Capacitance change	≦ ±20% of the initial value		
	D.F.(tanδ)	≦ 150% of the specified value		
	ESR	≦ 150% of the specified value		
	Leakage current	≦ The specified value		
焊接耐热性 Resistance to soldering heat	按回流焊试验后, 应满足以下要求 Measurement for solder temperature profile shall be made at the capacitor top and the terminal.			
	Capacitance change	≦ ±10% of the initial value		
	D.F.(tanδ)	≦ 130% of the specified value		
	ESR	≦ 130% of the specified value		
	Leakage current	≦ The specified value		

◆ 外形图 Dimensions (mm)



ΦD	W	H	C	R	P
5	5.3	5.3	5.9	0.5~0.8	1.4
6.3	6.5	6.5	7.2	0.5~0.8	2.2
8	8.3	8.3	9.0	0.7~1.1	3.1
10	10.3	10.3	11.0	0.7~1.1	4.5



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◆ 纹波电流修正系数 Rated Ripple Current Coefficient

频率Frequency(Hz)	120Hz $\leq f < 1$ kHz	1kHz $\leq f < 10$ kHz	10kHz $\leq f < 100$ kHz	100kHz $\leq f < 500$ kHz
系数 Coefficient	0.05	0.30	0.70	1.00

◆ 尺寸与个技术参数一览表Standard Ratings

Rated voltage (V)	Rated capacitance (uF)	Case size $\Phi D \times L$ (mm)	ESR(m Ω) at 20℃,100 KHz	Leakage Current (μ A)	Rated ripple current (mA _{rms} /105℃/100kHz)
2.5	470	6.3*9	30	500	4100
	470	6.3*9	30	500	4100
	560	6.3*9	30	500	4100
	560	6.3*9	30	500	4100
	680	6.3*9	30	500	4100
	820	6.3*9	30	500	4100
4	560	6.3*9	30	500	4100
	680	6.3*9	30	544	4100
	820	6.3*9	30	656	4100
	1000	6.3*9	30	800	4100
	1200	6.3*9	30	960	4100
6.3	220	5*7.5	45	500	2500
	220	6.3*5.8	35	500	3200
	220	6.3*7	35	500	3500
	330	6.3*5.8	35	500	3200
	330	6.3*7	35	500	3500
	330	6.3*7.7	35	500	3500
	470	6.3*7.7	35	592	3500
	560	6.3*7.7	35	706	3500
	680	6.3*9	30	857	3800
	820	6.3*9	30	1033	3800
	1000	8*9.8	25	1260	4100
	1500	10*12.6	20	1890	4800
10	220	6.3*7	35	500	2650
	330	6.3*7	35	660	2650
	470	6.3*7.7	35	940	2700
	560	6.3*9	35	1120	2900
	680	8*9.8	25	1360	3500
	820	10*10.2	25	1640	4100
	820	8*12.6	25	1640	4100
	1000	8*12.6	25	2000	4100
	1500	10*12.6	25	2000	4500
16	47	6.3*7	50	500	2100
	68	6.3*7	40	500	2100
	100	6.3*5.8	40	500	1900



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◆ 尺寸与个技术参数一览表Standard Ratings

Rated voltage (V)	Rated capacitance (uF)	Case size ΦD×L(mm)	ESR(mΩ) at 20℃,100 KHz	Leakage Current (μA)	Rated ripple current (mA _{rms} /105℃/100kHz)
16	100	6.3*7	40	500	2100
	220	6.3*7	40	704	2100
	220	6.3*7.7	40	704	2260
	220	8*9.8	35	704	2690
	330	6.3*7.7	40	1056	2260
	330	8*9.8	40	1056	2900
	330	8*12.6	30	1056	3500
	470	8*9.8	40	1504	2900
	470	8*12.6	30	1504	3500
	680	8*12.6	30	2176	3500
	820	8*12.6	30	2624	3500
	1000	8*12.6	30	3200	3500
25	1500	10*12.6	30	4800	4100
	47	6.3*5.8	60	500	1870
	47	6.3*7	60	500	1950
	100	5*7.5	70	500	1650
	100	6.3*5.8	50	500	1870
	100	6.3*7	50	500	1950
	100	6.3*9	50	500	2100
	220	6.3*9	50	1100	2100
	220	8*9.8	50	1100	2690
	270	6.3*10	50	1350	2400
	330	8*9.8	50	1650	2690
	470	8*12.6	45	2350	3100
	470	10*10.2	45	2350	3100
	680	8*12.6	40	3400	3100
	680	10*12.6	35	3400	3800
	820	10*12.6	35	4100	3800
35	1000	10*12.6	35	5000	3800
	47	6.3*7	80	299	1410
	100	6.3*7	80	350	1516
	100	6.3*7.7	80	350	1870
	100	6.3*9	80	350	1950
	100	8*9.8	50	350	2450
	150	6.3*10	70	525	2100
	220	8*9.8	50	770	2450
	220	8*12.6	50	770	2910
	330	8*12.6	50	1155	2910
	330	10*12.6	40	1155	3640
	470	10*12.6	40	1155	3640



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Rated voltage (V)	Rated capacitance (uF)	Case size ΦD×L(mm)	ESR(mΩ) at 20℃,100 KHz	Leakage Current (μA)	Rated ripple current (mArms/105℃/100kHz)
50	10	5*9	100	299	550
	22	6.3*9	100	299	850
	33	6.3*9	100	299	850
	47	6.3*9	80	299	920
	47	8*9.8	60	299	1200
	47	8*12.6	60	299	1500
	100	8*9.8	60	500	1320
	100	8*12.6	60	500	1550
	100	10*12.6	55	500	2100
	150	8*12.6	60	750	1550
	220	10*12.6	55	1100	2100
63	10	6.3*9	110	299	750
	22	6.3*9	110	299	750
	33	6.3*9	100	299	820
	33	8*9.8	60	299	1100
	47	8*9.8	60	299	1100
	47	8*12.6	60	299	1300
	82	8*12.6	60	517	1550
	100	8*12.6	60	630	1550
	100	10*12.6	55	630	1800
	150	10*12.6	55	945	1800
80	10	6.3*9	120	299	550
	22	6.3*9	120	299	600
	22	8*9.8	70	299	950
	33	8*9.8	70	299	950
	33	8*12.6	70	299	1300
	47	8*12.6	70	376	1300
	56	8*12.6	70	448	1400
	68	10*12.6	50	544	1750
	100	10*12.6	50	800	1750
100	10	6.3*9	120	299	550
	22	8*9.8	80	299	950
	22	8*12.6	70	299	1300
	33	8*12.6	70	330	1300
	47	10*12.6	50	470	1700
	68	10*12.6	50	680	1750



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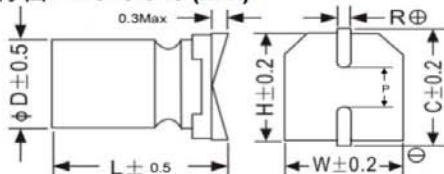
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- SMD type: lead free reflow soldering condition at 260°C peak correspondence
- RoHS Compliant

◆ 规格表 Specifications

项目Items	特性参数Characteristics			
使用温度范围 Category Temperature Range	-55 ~ +105℃			
额定工作电压范围 Rated Voltage Range	2.5 ~ 100V			
静电容量允许偏差 Capacitance tolerance	±20%(M) (at 20℃,120Hz)			
漏电流 Leakage Current	施加额定工作电压2分钟后读数, 小于或等于规格值 (at 20℃) Less than or equal to the specified value. After 2 minutes application of rated Voltage at 20℃		2.5~25V	35~100V ≤0.1CV 或 299μA(取大值)
损耗角正切值tanδ Dissipation Factor	Rated voltage (V)	2.5~6.3	10~100	(at 20℃,120Hz)
	tanδ (Max.)	0.08	0.12	
温度特性 Low Temperature Characteristics (Max.Impedance Ratio)	Z(-25℃)/Z(+20℃)	≤ 1.25		(100KHz)
	Z(-55℃)/Z(+20℃)	≤ 1.25		
耐久性 Endurance	105℃ 施加额定工作电压2000小时, 恢复到20℃后, 产品性能应满足以下要求 The specifications listed below shall be satisfied when the capacitors are restored to 20℃ after application of rated voltage for 2000 hours at 105℃.			
	Appearance	No significant damage		
	Capacitance change	≤ ±20% of the initial value		
	D.F.(tanδ)	≤ 150% of the specified value		
	ESR	≤ 150% of the specified value		
	Leakage current	≤ The specified value		
耐湿负荷特性 Damp Heat (Steady State)	在60℃ 温度, 湿度90%~95%RH的环境中, 施加额定电压1000小时后, 恢复到20℃后, 产品性能应满足以下要求 The specifications listed below shall be satisfied when the capacitors are restored to 20℃ after application of rated voltage for 1000 hours at 60℃,90%~ 95% RH.			
	Appearance	No significant damage		
	Capacitance change	≤ ±20% of the initial value		
	D.F.(tanδ)	≤ 150% of the specified value		
	ESR	≤ 150% of the specified value		
	Leakage current	≤ The specified value		
浪涌电压特性 (Surge Voltage)	浪涌电压=额定电压× 1.15(V) Surge Voltage=Rated voltage × 1.15(V) 在105℃环境中, 按充电30秒; 放电5分30秒, 连续施加浪涌电压1000次(Rc=1kΩ), 待恢复测试, 应满足以下要求 The capacitors shall be subjected to 1000 cycles each consisting of charge with the surge voltages specified at 105℃ for 30 seconds through a protective resistor (Rc=1kΩ) and discharge for 5 minutes 30 seconds.			
	Appearance	No significant damage		
	Capacitance change	≤ ±20% of the initial value		
	D.F.(tanδ)	≤ 150% of the specified value		
	ESR	≤ 150% of the specified value		
	Leakage current	≤ The specified value		
焊接耐热性 Resistance to soldering heat	按回流焊试验后, 应满足以下要求 Measurement for solder temperature profile shall be made at the capacitor top and the terminal.			
	Capacitance change	≤ ±10% of the initial value		
	D.F.(tanδ)	≤ 130% of the specified value		
	ESR	≤ 130% of the specified value		
	Leakage current	≤ The specified value		

◆ 外形图 Dimensions (mm)



ΦD	W	H	C	R	P
5	5.3	5.3	5.9	0.5~0.8	1.4
6.3	6.5	6.5	7.2	0.5~0.8	2.2
8	8.3	8.3	9.0	0.7~1.1	3.1
10	10.3	10.3	11.0	0.7~1.1	4.5



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◆ 纹波电流修正系数 Rated Ripple Current Coefficient

频率Frequency(Hz)	120Hz $\leq$ f < 1kHz	1kHz $\leq$ f < 10kHz	10kHz $\leq$ f < 100kHz	100kHz $\leq$ f < 500kHz
系数 Coefficient	0.05	0.30	0.70	1.00

◆ 尺寸与个技术参数一览表Standard Ratings

Rated voltage (V)	Rated capacitance (μ F)	Case size Φ D×L(mm)	ESR(m Ω) at 20℃, 100 KHz	Leakage Current (μ A)	Rated ripple current (mA _{rms} /105℃/100kHz)
2.5	470	6.3*9	15	500	4500
	470	8*9.8	15	500	4800
	560	6.3*9	15	500	4500
	560	8*9.8	15	500	4800
	680	8*12.6	12	500	5100
	820	8*12.6	12	500	5100
4	560	8*9.8	15	500	4500
	680	8*12.6	12	544	4700
	820	10*12.6	12	656	5500
	1000	10*12.6	10	800	5500
	1200	10*12.6	10	960	5500
6.3	220	6.3*9	18	500	3900
	270	6.3*9	18	500	4100
	330	6.3*9	18	500	4100
	470	8*9.8	15	592	4500
	560	8*9.8	15	592	4500
	680	8*12.6	12	857	4700
	820	10*12.6	10	1033	5500
	1000	10*12.6	10	1260	5500
	1500	10*12.6	10	1890	5500
10	220	6.3*9	22	500	3500
	270	6.3*9	22	540	3500
	330	8*9.8	18	660	4100
	470	8*9.8	18	940	4230
	560	8*9.8	18	1120	4230
	680	8*12.6	15	1360	4500
	820	10*12.6	12	1640	5300
	1000	10*12.6	12	2000	5300
16	47	6.3*9	25	500	2690
	68	6.3*9	25	500	2690
	82	6.3*9	25	500	2690
	100	6.3*9	25	500	2690
	220	6.3*9	25	704	2690



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Rated voltage (V)	Rated capacitance (uF)	Case size ΦD×L(mm)	ESR(mΩ) at 20℃,100 KHz	Leakage Current (μA)	Rated ripple current (mA _{rms} /105℃/100kHz)
16	220	8*9.8	20	704	3200
	220	8*12.6	16	704	4100
	270	8*9.8	20	864	3200
	330	6.3*9	22	1056	2690
	330	8*9.8	20	1056	3200
	330	8*12.6	16	1056	4100
	470	8*12.6	16	1504	4100
	470	10*12.6	14	1504	5100
	560	8*12.6	16	1792	4100
	680	10*12.6	14	2176	5100
	820	10*12.6	14	2624	5100
	1000	10*12.6	14	3200	5100
25	22	6.3*9	30	500	2100
	33	6.3*9	30	500	2100
	47	6.3*9	30	500	2100
	47	8*9.8	25	500	2690
	68	6.3*9	30	500	2100
	82	6.3*9	30	500	2100
	100	6.3*9	30	500	2100
	100	8*9.8	25	500	2690
	150	8*9.8	25	750	2690
	220	8*12.6	25	1100	2900
	220	10*12.6	20	1100	3500
	270	8*12.6	25	1350	2900
	330	10*12.6	20	1650	3500
	470	10*12.6	20	2350	3500
35	10	6.3*9	90	299	1350
	22	6.3*9	90	299	1410
	33	6.3*9	90	299	1410
	47	6.3*9	60	299	1410
	82	8*9.8	35	299	1900
	100	8*9.8	30	350	1900
	100	8*12.6	25	350	2690
	220	10*12.6	20	770	3100



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Rated voltage (V)	Rated capacitance (uF)	Case size ΦD×L(mm)	ESR(mΩ) at 20℃,100 KHz	Leakage Current (μA)	Rated ripple current (mA rms/105℃/100kHz)
50	10	6.3*9	90	299	800
	22	6.3*9	90	299	850
	33	8*9.8	30	299	1300
	47	8*12.6	25	299	1500
	68	8*12.6	25	340	1500
	100	8*12.6	25	500	1500
	120	10*12.6	20	600	2100
	220	10*12.6	20	1100	2100
63	10	6.3*9	90	299	750
	22	8*9.8	35	299	1100
	33	8*9.8	35	299	1100
	33	8*12.6	30	299	1300
	47	8*12.6	30	299	1300
	68	8*12.6	30	428	1300
	82	10*12.6	25	517	1800
	100	10*12.6	25	630	1800
80	10	6.3*9	100	299	550
	22	8*9.8	50	299	1100
	22	8*12.6	40	299	1300
	33	8*12.6	40	299	1300
	47	10*12.6	35	376	1800
100	10	8*9.8	55	299	850
	15	8*12.6	45	299	1190
	22	10*12.6	40	299	1550
	33	10*12.6	40	330	1550



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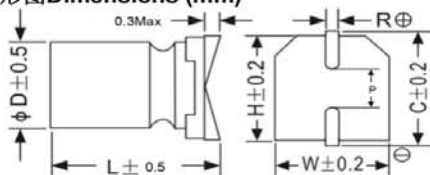
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- Low ESR, High ripple, miniaturized
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◆ 规格表 Specifications

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使用温度范围 Category Temperature Range	-55 ~ +105℃			
额定工作电压范围 Rated Voltage Range	2.5 ~ 100V			
静电容量允许偏差 Capacitance tolerance	±20%(M) (at 20℃,120Hz)			
漏电流 Leakage Current	施加额定工作电压2分钟后读数, 小于或等于规格值 (at 20℃) Less than or equal to the specified value. After 2 minutes application of rated Voltage at 20℃		2.5~25V ≤0.2CV 或500μA(取大值)	35~100V ≤0.1CV 或 299μA(取大值)
损耗角正切值tanδ Dissipation Factor	Rated voltage (V)	2.5~6.3	10~100	(at 20℃,120Hz)
	tanδ (Max.)	0.08	0.12	
温度特性 Low Temperature Characteristics (Max.Impedance Ratio)	Z(-25℃)/Z(+20℃)	≤ 1.25		(100KHz)
	Z(-55℃)/Z(+20℃)	≤1.25		
耐久性 Endurance	105℃施加额定工作电压5000小时, 恢复到20℃后, 产品性能应满足以下要求 The specifications listed below shall be satisfied when the capacitors are restored to 20℃ after application of rated voltage for 5000 hours at 105℃.			
	Appearance	No significant damage		
	Capacitance change	≤ ±20% of the initial value		
	D.F.(tanδ)	≤ 150% of the specified value		
	ESR	≤ 150% of the specified value		
	Leakage current	≤ The specified value		
耐湿负荷特性 Damp Heat (Steady State)	在60℃ 温度, 湿度90%~95%RH的环境中, 施加额定电压1000小时后, 恢复到20℃后, 产品性能应满足以下要求 The specifications listed below shall be satisfied when the capacitors are restored to 20℃after application of rated voltage for 1000 hours at 60℃,90%~ 95% RH.			
	Appearance	No significant damage		
	Capacitance change	≤ ±20% of the initial value		
	D.F.(tanδ)	≤ 150% of the specified value		
	ESR	≤ 150% of the specified value		
	Leakage current	≤ The specified value		
浪涌电压特性 (Surge Voltage)	浪涌电压=额定电压× 1.15(V) Surge Voltage=Rated voltage × 1.15(V) 在105℃环境中, 按充电30秒; 放电5分30秒, 连续施加浪涌电压1000次(Rc=1kΩ), 待恢复测试, 应满足以下要求 The capacitors shall be subjected to 1000 cycles each consisting of charge with the surge voltages specified at 105℃ for 30 seconds through a protective resistor (Rc=1kΩ) and discharge for 5 minutes 30 seconds.			
	Appearance	No significant damage		
	Capacitance change	≤ ±20% of the initial value		
	D.F.(tanδ)	≤ 150% of the specified value		
	ESR	≤ 150% of the specified value		
	Leakage current	≤ The specified value		
焊接耐热性 Resistance to soldering heat	按回流焊试验后, 应满足以下要求 Measurement for solder temperature profile shall be made at the capacitor top and the terminal.			
	Capacitance change	≤ ±10% of the initial value		
	D.F.(tanδ)	≤ 130% of the specified value		
	ESR	≤ 130% of the specified value		
	Leakage current	≤ The specified value		

◆ 外形图 Dimensions (mm)



ΦD	W	H	C	R	P
5	5.3	5.3	5.9	0.5~0.8	1.4
6.3	6.5	6.5	7.2	0.5~0.8	2.2
8	8.3	8.3	9.0	0.7~1.1	3.1
10	10.3	10.3	11.0	0.7~1.1	4.5



Distributeur : JBG-METAFIX

MB Series

◆ 纹波电流修正系数 Rated Ripple Current Coefficient

频率Frequency(Hz)	120Hz $\leq f < 1$ kHz	1kHz $\leq f < 10$ kHz	10kHz $\leq f < 100$ kHz	100kHz $\leq f < 500$ kHz
系数 Coefficient	0.05	0.30	0.70	1.00

◆ 尺寸与个技术参数一览表Standard Ratings

Rated voltage (V)	Rated capacitance (uF)	Case size $\Phi D \times L$ (mm)	ESR(m Ω) at 20 $^{\circ}$ C, 100 KHz	Leakage Current (μ A)	Rated ripple current (mA _{rms} /105 $^{\circ}$ C/100kHz)
2.5	470	6.3*9	30	500	4100
	470	6.3*9	30	500	4100
	560	6.3*9	30	500	4100
	560	6.3*9	30	500	4100
	680	6.3*9	30	500	4100
	820	6.3*9	30	500	4100
4	560	6.3*9	30	500	4100
	680	6.3*9	30	544	4100
	820	6.3*9	30	656	4100
	1000	6.3*9	30	800	4100
	1200	6.3*9	30	960	4100
6.3	220	5*7.5	45	500	2500
	220	6.3*7	35	500	3500
	330	6.3*7	35	500	3500
	330	6.3*7.7	35	500	3500
	470	6.3*7.7	35	592	3500
	560	6.3*7.7	35	706	3500
	680	6.3*9	30	857	3800
	820	6.3*9	30	1033	3800
	1000	8*9.8	25	1260	4100
	1500	10*12.6	20	1890	4800
10	220	6.3*7	35	500	2650
	330	6.3*7	35	660	2650
	470	6.3*7.7	35	940	2700
	560	6.3*9	35	1120	2900
	680	8*9.8	25	1360	3500
	820	10*10.2	25	1640	4100
	820	8*12.6	25	1640	4100
	1000	8*12.6	25	2000	4100
	1500	10*12.6	25	2000	4500
16	47	6.3*7	50	500	2100
	68	6.3*7	40	500	2100
	100	6.3*7	40	500	2100



Distributeur : JBG-METAFIX

MB Series

◆ 尺寸与个技术参数一览表Standard Ratings

Rated voltage (V)	Rated capacitance (uF)	Case size ΦD×L(mm)	ESR(mΩ) at 20℃,100 KHz	Leakage Current (μA)	Rated ripple current (mA _{rms} /105℃/100kHz)
16	220	6.3*7	40	704	2100
	220	6.3*7.7	40	704	2260
	220	8*9.8	35	704	2690
	330	6.3*7.7	40	1056	2260
	330	8*9.8	40	1056	2900
	330	8*12.6	30	1056	3500
	470	8*9.8	40	1504	2900
	470	8*12.6	30	1504	3500
	680	8*12.6	30	2176	3500
	820	8*12.6	30	2624	3500
	1000	8*12.6	30	3200	3500
	1500	10*12.6	30	4800	4100
25	47	6.3*7	60	500	1950
	100	5*7.5	70	500	1650
	100	6.3*7	50	500	1950
	100	6.3*9	50	500	2100
	220	6.3*9	50	1100	2100
	220	8*9.8	50	1100	2690
	270	6.3*10	50	1350	2400
	330	8*9.8	50	1650	2690
	470	8*12.6	45	2350	3100
	470	10*10.2	45	2350	3100
	680	8*12.6	40	3400	3100
	680	10*12.6	35	3400	3800
	820	10*12.6	35	4100	3800
	1000	10*12.6	35	5000	3800
35	47	6.3*7	80	299	1410
	100	6.3*7	80	350	1516
	100	6.3*7.7	80	350	1870
	100	6.3*9	80	350	1950
	100	8*9.8	50	350	2450
	150	6.3*10	70	525	2100
	220	8*9.8	50	770	2450
	220	8*12.6	50	770	2910
	330	8*12.6	50	1155	2910
	330	10*12.6	40	1155	3640
	470	10*12.6	40	1155	3640



Distributeur : JBG-METAFIX

MB Series

◆ 尺寸与个技术参数一览表Standard Ratings

Rated voltage (V)	Rated capacitance (μ F)	Case size Φ D×L(mm)	ESR($m\Omega$) at 20℃,100 KHz	Leakage Current (μ A)	Rated ripple current (mA _{rms} /105℃/100kHz)
50	10	5*9	100	299	550
	22	6.3*9	100	299	850
	33	6.3*9	100	299	850
	47	6.3*9	80	299	920
	47	8*9.8	60	299	1200
	47	8*12.6	60	299	1500
	100	8*9.8	60	500	1320
	100	8*12.6	60	500	1550
	100	10*12.6	55	500	2100
	150	8*12.6	60	750	1550
	220	10*12.6	55	1100	2100
63	10	6.3*9	110	299	750
	22	6.3*9	110	299	750
	33	6.3*9	100	299	820
	33	8*9.8	60	299	1100
	47	8*9.8	60	299	1100
	47	8*12.6	60	299	1300
	82	8*12.6	60	517	1550
	100	8*12.6	60	630	1550
	100	10*12.6	55	630	1800
	150	10*12.6	55	945	1800
80	10	6.3*9	120	299	550
	22	6.3*9	120	299	600
	22	8*9.8	70	299	950
	33	8*9.8	70	299	950
	33	8*12.6	70	299	1300
	47	8*12.6	70	376	1300
	56	8*12.6	70	448	1400
	68	10*12.6	50	544	1750
	100	10*12.6	50	800	1750
100	10	6.3*9	120	299	550
	22	8*9.8	80	299	950
	22	8*12.6	70	299	1300
	33	8*12.6	70	330	1300
	47	10*12.6	50	470	1700
	68	10*12.6	50	680	1750



Distributeur : JBG-METAFIX

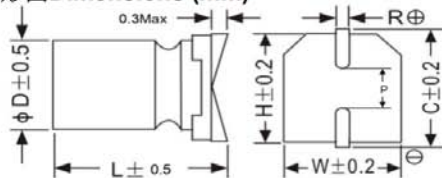
MB Series

- Low ESR, High ripple, miniaturized
- SMD type: lead free reflow soldering condition at 260°C peak correspondence
- RoHS Compliant

规格表 Specifications

项目Items	特性参数Characteristics			
使用温度范围 Category Temperature Range	-55 ~ +105℃			
额定工作电压范围 Rated Voltage Range	10 ~ 50V			
静电容量允许偏差 Capacitance tolerance	±20%(M) (at 20℃,120Hz)			
漏电流 Leakage Current	施加额定工作电压2分钟后读数, 小于或等于规格值 (at 20℃) ISO.03CV 或18μA (取大值) Less than or equal to the specified value. After 2 minutes application of rated Voltage at 20℃			
损耗角正切值tanδ Dissipation Factor	Rated voltage (V)	10~50	(at 20℃,120Hz)	
	tanδ (Max.)	0.16		
温度特性 Low Temperature Characteristics (Max.Impedance Ratio)	Z(-25℃)/Z(+20℃)	≤0.75 to2.0	(100KHz)	
	Z(-55℃)/Z(+20℃)	≤0.75 to2.0		
耐久性 Endurance	105℃施加额定工作电压2000小时, 恢复到20℃后, 产品性能应满足以下要求 The specifications listed below shall be satisfied when the capacitors are restored to 20℃ after application of rated voltage for 2000 hours at 105℃.			
	Appearance	No significant damage		
	Capacitance change	≤±30% of the initial value		
	D.F.(tanδ)	≤200% of the specified value		
	ESR	≤200% of the specified value		
	Leakage current	≤ The specified value		
耐湿负荷特性 Damp Heat (Steady State)	在60℃ 温度, 湿度90%~95%RH的环境中, 施加额定电压1000小时后, 恢复到20℃后, 产品性能应满足以下要求 The specifications listed below shall be satisfied when the capacitors are restored to 20℃ after application of rated voltage for 1000 hours at 60℃,90%~ 95% RH.			
	Appearance	No significant damage		
	Capacitance change	≤±30% of the initial value		
	D.F.(tanδ)	≤200% of the specified value		
	ESR	≤200% of the specified value		
	Leakage current	≤ The specified value		
浪涌电压特性 (Surge Voltage)	浪涌电压=额定电压×1.25(V) Surge Voltage=Rated voltage × 1.25(V) 在105℃环境中, 按充电30秒; 放电5分30秒, 连续施加浪涌电压1000次(Rc=1kΩ), 待恢复测试, 应满足以下要求 The capacitors shall be subjected to 1000 cycles each consisting of charge with the surge voltages specified at 105℃ for 30 seconds through a protective resistor (Rc=1kΩ) and discharge for 5 minutes 30 seconds.			
	Appearance	No significant damage		
	Capacitance change	≤±30% of the initial value		
	D.F.(tanδ)	≤200% of the specified value		
	ESR	≤200% of the specified value		
	Leakage current	≤ The specified value		
焊接耐热性 Resistance to soldering heat	按回流焊试验后, 应满足以下要求 Measurement for solder temperature profile shall be made at the capacitor top and the terminal.			
	Capacitance change	≤±10% of the initial value		
	D.F.(tanδ)	≤130% of the specified value		
	ESR	≤130% of the specified value		
	Leakage current	≤ The specified value		

外形图 Dimensions (mm)



ΦD	W	H	C	R	P
5	5.3	5.3	5.9	0.5~0.8	1.4
6.3	6.5	6.5	7.2	0.5~0.8	2.2
8	8.3	8.3	9.0	0.7~1.1	3.1
10	10.3	10.3	11.0	0.7~1.1	4.5



Distributeur : JBG-METAFIX

MB Series

◆ 纹波电流修正系数 Rated Ripple Current Coefficient

频率Frequency(Hz)	120Hz $\leq f < 1$ kHz	1kHz $\leq f < 10$ kHz	10kHz $\leq f < 100$ kHz	100kHz $\leq f < 500$ kHz
系数 Coefficient	0.05	0.30	0.70	1.00

◆ 尺寸与个技术参数一览表Standard Ratings

Rated voltage (V)	Rated capacitance (uF)	Case size $\Phi D \times L$ (mm)	ESR(m Ω) at 20°C, 100 KHz	Leakage Current (μA)	Rated ripple current (mA rms/105°C/100kHz)
10	100	6.3*9	40	30	2000
	220	6.3*9	40	30	2000
	330	6.3*9	40	99	2000
	470	8*9.8	25	141	2200
	680	8*12.6	25	204	2690
	820	8*12.6	25	820	2690
	1000	10*12.6	15	300	3100
	1500	10*12.6	15	450	3100
16	100	6.3*9	40	48	1500
	220	6.3*9	40	106	1500
	220	8*9.8	25	106	2000
	330	8*9.8	25	158	2000
	470	8*12.6	25	226	2250
	680	8*12.6	25	326	2250
	820	10*12.6	18	394	2900
	1000	10*12.6	18	480	2900
25	47	6.3*9	50	35	1400
	100	6.3*9	50	75	1500
	100	8*9.8	30	75	1800
	220	8*12.6	30	165	2100
	330	8*12.6	30	248	2100
	330	10*12.6	16	248	2900
	470	10*12.6	16	353	2900
35	47	6.3*9	60	49	1300
	100	8*9.8	30	105	1800
	100	8*12.6	30	105	2100
	150	8*12.6	30	158	2100
	220	8*12.6	30	231	2100
	220	10*12.6	20	231	2830
	330	10*12.6	20	347	2830



Distributeur : JBG-METAFIX

MB Series

◆ 尺寸与个技术参数一览表Standard Ratings

Rated voltage (V)	Rated capacitance (uF)	Case size ΦD×L(mm)	ESR(mΩ) at 20℃,100 KHz	Leakage Current (μA)	Rated ripple current (mA _{rms} /105℃/100kHz)
50	10	6.3*9	80	18	1200
	22	6.3*9	80	33	1200
	33	6.3*9	70	50	1250
	47	8*9.8	35	71	1670
	100	8*9.8	35	150	1670
	100	8*12.6	35	150	1800
	150	8*12.6	35	158	1800
	220	10*12.6	25	330	2650



Distributeur : JBG-METAFIX

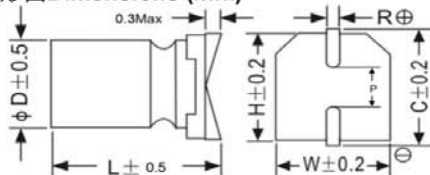
MB Series

- Low ESR, High ripple, miniaturized, high temperature
- SMD type: lead free reflow soldering condition at 260 °C peak correspondence
- RoHS Compliant

◆ 规格表 Specifications

项目Items	特性参数Characteristics			
使用温度范围 Category Temperature Range	-55 ~ +125℃			
额定工作电压范围 Rated Voltage Range	2.5 ~ 100V			
静电容量允许偏差 Capacitance tolerance	±20%(M) (at 20℃,120Hz)			
漏电流 Leakage Current	施加额定工作电压2分钟后读数, 小于或等于规格值 (at 20℃) Less than or equal to the specified value. After 2 minutes application of rated Voltage at 20℃		2.5~25V ≤0.2CV 或500μA(取大值)	35~100V ≤0.1CV 或299μA(取大值)
损耗角正切值tanδ Dissipation Factor	Rated voltage (V)	2.5~6.3	10~100	(at 20℃,120Hz)
	tanδ (Max.)	0.08	0.12	
温度特性 Low Temperature Characteristics (Max.Impedance Ratio)	Z(-25℃)/Z(+20℃)	≒ 1.25		(100KHz)
	Z(-55℃)/Z(+20℃)	≤1.25		
耐久性 Endurance	125℃施加额定工作电压2000小时, 恢复到20℃后, 产品性能应满足以下要求 The specifications listed below shall be satisfied when the capacitors are restored to 20℃ after application of rated voltage for 2000 hours at 125℃.			
	Appearance	No significant damage		
	Capacitance change	≤±20% of the initial value		
	D.F.(tanδ)	≤ 150% of the specified value		
	ESR	≤ 150% of the specified value		
	Leakage current	≤ The specified value		
耐湿负荷特性 Damp Heat (Steady State)	在60℃ 温度, 湿度90%~95%RH的环境中, 施加额定电压1000小时后, 恢复到20℃后, 产品性能应满足以下要求 The specifications listed below shall be satisfied when the capacitors are restored to 20℃ after application of rated voltage for 1000 hours at 60℃,90%~ 95% RH.			
	Appearance	No significant damage		
	Capacitance change	≤±20% of the initial value		
	D.F.(tanδ)	≤ 150% of the specified value		
	ESR	≤ 150% of the specified value		
	Leakage current	≤ The specified value		
浪涌电压特性 (Surge Voltage)	浪涌电压=额定电压× 1.15(V) Surge Voltage=Rated voltage × 1.15(V) 在125℃环境中, 按充电30秒; 放电5分30秒, 连续施加浪涌电压1000次(Rc=1kΩ), 待恢复测试, 应满足以下要求 The capacitors shall be subjected to 1000 cycles each consisting of charge with the surge voltages specified at 125℃ for 30 seconds through a protective resistor (Rc=1kΩ) and discharge for 5 minutes 30 seconds.			
	Appearance	No significant damage		
	Capacitance change	≤±20% of the initial value		
	D.F.(tanδ)	≤ 150% of the specified value		
	ESR	≤ 150% of the specified value		
	Leakage current	≤ The specified value		
焊接耐热性 Resistance to soldering heat	按回流焊试验后, 应满足以下要求 Measurement for solder temperature profile shall be made at the capacitor top and the terminal.			
	Capacitance change	≤±10% of the initial value		
	D.F.(tanδ)	≤ 130% of the specified value		
	ESR	≤ 130% of the specified value		
	Leakage current	≤ The specified value		

◆ 外形图 Dimensions (mm)



ΦD	W	H	C	R	P
5	5.3	5.3	5.9	0.5~0.8	1.4
6.3	6.5	6.5	7.2	0.5~0.8	2.2
8	8.3	8.3	9.0	0.7~1.1	3.1
10	10.3	10.3	11.0	0.7~1.1	4.5



Distributeur : JBG-METAFIX

MB Series

◆ 纹波电流修正系数 Rated Ripple Current Coefficient

频率Frequency(Hz)	120Hz $\leq f < 1$ kHz	1kHz $\leq f < 10$ kHz	10kHz $\leq f < 100$ kHz	100kHz $\leq f < 500$ kHz
系数 Coefficient	0.05	0.30	0.70	1.00

◆ 尺寸与个技术参数一览表Standard Ratings

Rated voltage (V)	Rated capacitance (uF)	Case size $\Phi D \times L$ (mm)	ESR(m Ω) at 20℃,100 KHz	Leakage Current (uA)	Rated ripple current (mA _{rms} /125℃/100kHz)
2.5	470	6.3*9	30	500	2369
	470	6.3*9	30	500	2369
	560	6.3*9	30	500	2369
	560	6.3*9	30	500	2369
	680	6.3*9	30	500	2369
	820	6.3*9	30	500	2369
4	560	6.3*9	30	500	2369
	680	6.3*9	30	544	2369
	820	6.3*9	30	656	2369
	1000	6.3*9	30	800	2369
	1200	6.3*9	30	960	2369
6.3	220	6.3*7	35	500	2025
	330	6.3*7	35	500	2025
	470	6.3*9	35	500	2200
	560	6.3*9	35	706	2200
	680	6.3*9	35	857	2200
	820	8*9.8	25	1033	2369
	1000	8*9.8	25	1260	2369
	1500	10*12.6	25	1890	2770
10	220	6.3*7	35	500	1530
	330	6.3*7	35	660	1530
	470	6.3*7.7	35	940	1570
	560	6.3*9	35	1120	1680
	680	8*9.8	25	1360	2030
	820	10*10.2	25	1640	2369
	820	8*12.6	25	1640	2369
	1000	8*12.6	25	2000	2369
	1500	10*12.6	25	2000	2600
16	47	6.3*7	50	500	1220
	68	6.3*7	40	500	1220
	100	6.3*7	40	500	1220
	220	6.3*7	40	704	1220
	220	6.3*7.7	40	704	1300



Distributeur : JBG-METAFIX

MB Series

◆ 尺寸与个技术参数一览表Standard Ratings

Rated voltage (V)	Rated capacitance (μ F)	Case size Φ D×L(mm)	ESR(m Ω) at 20℃,100 KHz	Leakage Current (μ A)	Rated ripple current (mA _{rms} /105℃/100kHz)
16	220	8*9.8	35	704	1550
	330	6.3*7.7	40	1056	1300
	330	8*9.8	40	1056	1680
	330	8*12.6	30	1056	2030
	470	8*9.8	40	1504	1680
	470	8*12.6	30	1504	2030
	680	8*12.6	30	2176	2030
	820	8*12.6	30	2624	2030
	1000	8*12.6	30	3200	2030
25	1500	10*12.6	30	4800	2369
	47	6.3*7	60	500	1128
	100	6.3*7	50	500	1128
	100	6.3*9	50	500	1215
	220	6.3*9	50	1100	1215
	220	8*9.8	50	1100	1555
	270	8*9.8	50	1350	1555
	330	8*9.8	50	1650	1555
	470	8*12.6	45	2350	1800
	470	10*10.2	45	2350	1800
	680	10*12.6	35	3400	2200
	820	10*12.6	35	4100	2200
35	47	6.3*7	80	299	850
	100	6.3*10	80	350	1220
	100	8*9.8	50	350	1450
	220	8*12.6	50	770	1690
	330	10*12.6	40	1155	2100
50	10	5*9	100	299	450
	22	6.3*9	100	299	650
	33	6.3*9	100	299	650
	47	6.3*9	80	299	700
	47	8*9.8	60	299	750
	47	8*12.6	60	299	850
	100	8*9.8	60	500	750
	100	8*12.6	60	500	850
	100	10*12.6	55	500	1220
	150	8*12.6	60	750	900
	220	10*12.6	55	1100	1220



Distributeur : JBG-METAFIX

MB Series

◆ 尺寸与个技术参数一览表Standard Ratings

Rated voltage (V)	Rated capacitance (uF)	Case size ΦD×L(mm)	ESR(mΩ) at 20℃,100 KHz	Leakage Current (μA)	Rated ripple current (mA _{rms} /105℃/100kHz)
63	10	6.3*9	110	299	630
	22	6.3*9	110	299	630
	33	6.3*9	100	299	630
	33	8*9.8	60	299	710
	47	8*9.8	60	299	710
	47	8*12.6	60	299	790
	82	8*12.6	60	517	890
	100	8*12.6	60	630	890
	100	10*12.6	55	630	1050
	150	10*12.6	55	945	1050
80	10	6.3*9	120	299	450
	22	8*9.8	70	299	550
	33	8*12.6	70	299	750
	47	8*12.6	70	376	750
	68	10*12.6	50	544	950
100	10	8*9.8	120	299	550
	22	8*12.6	70	299	750
	33	10*12.6	70	330	950