



广东容硕半导体有限公司
Guangdong Roso Semiconductor Co.,Ltd

承 认 书

APPROVAL SHEET

产品名称 Commodity	SMD 导电聚合物铝固体电 容 器 SMD Conductive Polymer Aluminum Solid Capacitors(OS-CON)		
产品品号 Our part no.	160GVEA101M0645		
规 格 Catalog type	GVEA	16V100uF	Φ6.3×L4.5
客户品号 Customerpart no.			
适用机种 Ideally suited			
特记事项 Notes			

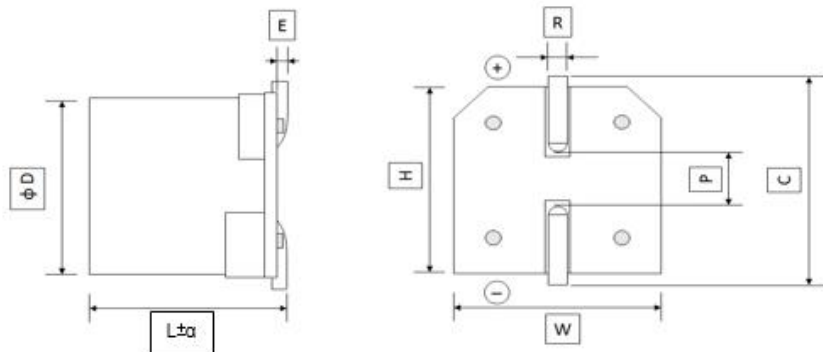
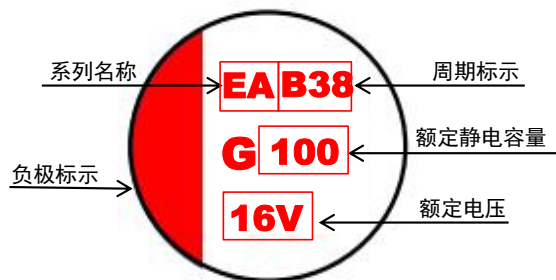
拟 制 DESIGNED	审 核 CHECKED	批 准 APPROVED
陈小英	黄杰	徐永康

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SMD导电聚合物铝固体电容器
SMD Conductive Polymer Aluminum Solid Capacitors (OS-CON)

● 印字标示与制品尺寸 Outer marking and dimensions

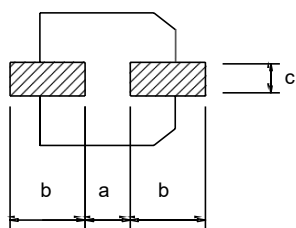


尺寸编码 Size code	φ D±0.5 (mm)	L (mm)	α (mm)	E (mm)	W±0.2 (mm)	H±0.2 (mm)	C±0.2 (mm)	R (mm)	P±0.3 (mm)
0545	5.0	4.2	+0.4~-0.3	0.00~0.20	5.3	5.3	6.0	0.5~0.8	1.4
0506	5.0	5.8	0.2	0.00~0.20	5.3	5.3	6.0	0.5~0.8	1.4
0645	6.3	4.3	0.2	0.00~0.20	6.6	6.6	7.3	0.5~0.8	2.1
0606	6.3	5.8	0.5	0.00~0.20	6.6	6.6	7.3	0.5~0.8	2.1
0608	6.3	7.5	0.5	0.00~0.20	6.6	6.6	7.3	0.5~0.8	2.1
0610	6.3	9.7	0.3	0.00~0.20	6.6	6.6	7.3	0.6~0.9	2.1
0807	8.0	6.8	0.2	0.00~0.20	8.3	8.3	9.0	0.8~1.1	2.9
0810	8.0	9.7	0.3	0.00~0.20	8.3	8.3	9.0	0.8~1.1	2.9
0812	8.0	12.0	0.5	0.00~0.20	8.3	8.3	9.0	0.8~1.1	3.2
1008	10.0	7.5	0.5	0.00~0.20	10.3	10.3	11.0	0.8~1.1	4.6
1012	10.0	12.3	0.2	0.00~0.20	10.3	10.3	11.0	0.8~1.1	4.6

● 电性标准参数 Standard ratings

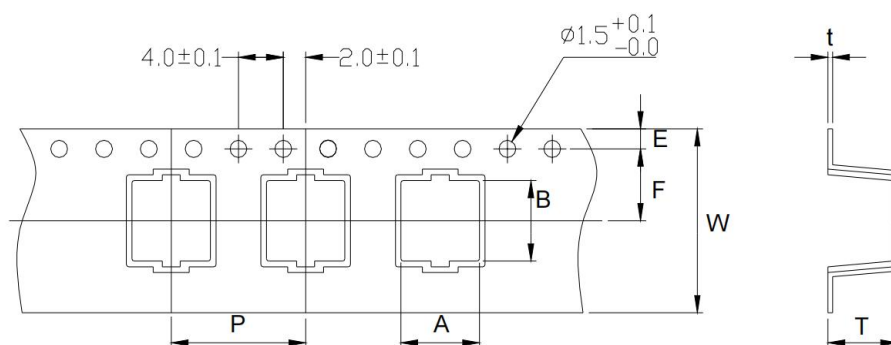
NO.	客户料号	料号	额定电压	浪涌电压	额定容量	容量许容差	温度范围	TANδ	漏电流	纹波电流	阻抗值	负荷寿命
	Customer Part No.	GATHER Part No.	Rated Voltage	Surge Voltage	Rated Cap	Cap Tolerance	Operating Temp.Range	Max.	Leakage Current (μA)	Ripple Current (mA r.m.s)	Impedance (mΩ.Max)	Endurance (Hours)
			(V.DC)	(V.DC)	(μF)	(%)	(℃)	20℃/120Hz	20℃/2min	100kHz/105℃	100k to 300kHz 20℃	105℃
1		160GVEA101M0645	16	18.4	100	-20~+20%	-55~+105℃	0.12	320	2450	40	2000
尺寸Size (mm)		特记事项							符合Rohs指令		符合Reach法规	
Φ 6.3×L4.5									✓		✓	

● 焊垫尺寸 Soldering pad dimensions



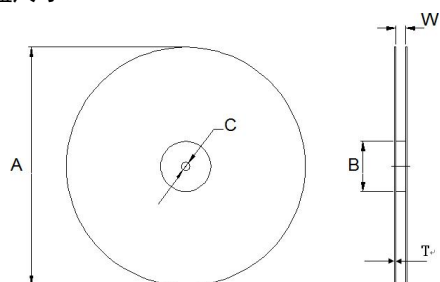
尺寸编码 Size code	a	b	c
φ5	1.4	3	1.6
φ6	2.1	3.5	1.6
φ8	2.8	4.2	1.9
φ10	4.3	4.4	1.9

● 编带尺寸 Carrier tape dimensions



尺寸编码 Size code	W±0.3 (mm)	A±0.2 (mm)	B±0.2 (mm)	F±0.1 (mm)	E±0.1 (mm)	P±0.1 (mm)	T±0.2 (mm)	t ±0.05 (mm)
0545	12	5.7	5.7	5.5	1.75	12	4.8	0.4
0506	12	5.7	5.7	5.5	1.75	12	6.2	0.4
0645	16	7	7	7.5	1.75	12	4.8	0.4
0606	16	7	7	7.5	1.75	12	6.3	0.4
0608	16	7	7	7.5	1.75	12	8.2	0.5
0610	16	7	7	7.5	1.75	12	10	0.5
0807	24	8.7	8.7	11.5	1.75	16	7.2	0.4
0810	24	8.7	8.7	11.5	1.75	16	10	0.5
0812	24	8.7	8.7	11.5	1.75	16	12	0.5
1008	24	10.7	10.7	11.5	1.75	16	8.2	0.5
1012	24	10.7	10.7	11.5	1.75	16	13	0.5

● 卷盘尺寸 Reel dimensions



尺寸编码 Size code	A ± 2 (mm)	B ± 0.5 (mm)	C±0.5 (mm)	W±0.8 (mm)	T±0.3 (mm)
φ 5	381	100	13	13.5	2.5
φ 6	381	100	13	16.5	2.5
φ 8	381	100	13	25.9	2.5
φ 10	381	100	13	25.9	2.5

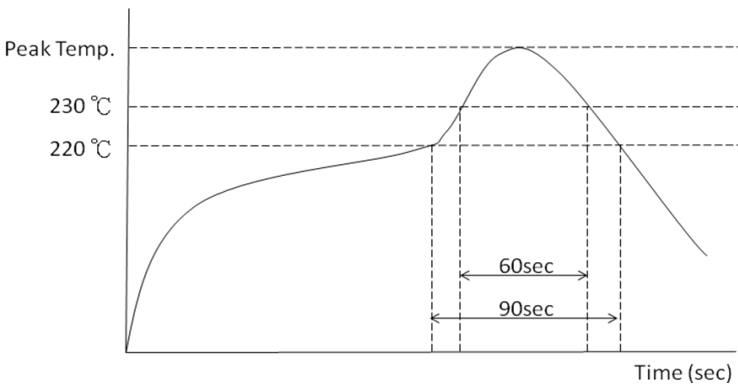


● 包装规格 Quantity of package

尺寸编码 Size code	1 盘 1 Reel	1 箱 1 Box
0545	1. 5K pcs	9K pcs (6 reels)
0506	1. 2K pcs	7. 2K pcs (6 reels)
0645	1. 5K pcs	9K pcs (6 reels)
0606	1. 2K pcs	7. 2K pcs (6 reels)
0608	900 pcs	5. 4K pcs (6 reels)
0610	750 pcs	4. 5K pcs (6 reels)
0807	750 pcs	3. 75K pcs (5 reels)
0810	500 pcs	2. 5K pcs (5 reels)
0812	400 pcs	2K pcs (5 reels)
1008	500 pcs	2. 5K pcs (5 reels)
1012	400 pcs	2K pcs (5 reels)

● 回流焊接 Reflow soldering

焊接条件（温度和时间）在以下范围内。



峰值温度 Peak temperature (max)	260 °C
220 °C 最长时间 220 °C over time (max)	90s
230 °C 最长时间 230 °C over time (max)	60s
回流次数 Reflow number	1次 only 1 time



SMD导电聚合物铝固体电容器
SMD Conductive Polymer Aluminum Solid Capacitors (OS-CON)

1、概述 SCOPE

本承认书规定了GVEA系列SMD导电聚合物铝固体电容器的技术规范，本技术规范条文解释权归本公司所有。
This specification cover"GVEA series" SMD Conductive Polymer Aluminum Solid Capacitors(OS-CON), GATHER reserves the right of final interpretation for technical specification.

2、参考标准 APPLICABLE SPECIFICATION

- JIS C 5141-1991 ● GB-5993-91
- JIS C 5102

3、测试环境 CONDITION OF TEST

如果没有其他规定，标准的测试、检验环境条件如下：
环境温度：15~35℃
相对湿度：45~75%
大气压力：86~106KPa

如果对测试结果有异议，标准测试条件如下：
环境温度：20±1℃
相对湿度：60~67%
大气压力：86~106KPa

Unless otherwise specified, the standard range of atmospheric conditions for making measurements and tests are as follows:
Ambient temperature : 15°C to 35°C
Relative humidity : 45% to 75%
Air pressure: 86kPa to 106kPa

If there may be doubt on the results, measurements shall be made within the following limits:
Ambient temperature : 20±1°C
Relative humidity: 60% to 67%
Air pressure : 86kPa to 106kPa

4、性能试验 CHARACTERISTICS

NO.	试验项目 ITEMS	试验条件 CONDITIONS	特性规格 SPECIFICATIONS
4.1	低温特性 LOW TEMPERATURE CHARACTERISTIC	* 在+20℃±2℃和-55 ⁺⁰ ₋₃ ℃条件 经2小时稳定后分别测试阻抗值 THE RATIO OF IMPEDANCE MEASURED AT 20℃±2℃FOR 2HOURS TO INPEDANCE MEASUREDAT -55 ⁺⁰ ₋₃ ℃	Z-55℃/Z20℃=1.25MAX
4.2	稳态湿热 (耐湿性) RESISTANCE OF DAMP HEAT (STEADY STATE)	温度：40±2℃ Test Temperature:40±2℃ 湿度：90-95%Rh Relative Hwmidity:90-95%Rh 时间：240±8hrs 试验后常温放置24-48小时 To expose in the atmospheric condition for 24to 48 hours after completion of test	漏电流：不超过规定值 Leakage current:Not more than the specified value 电容量变化：初测值的±10%以内 Capacitance Change :within±10% of the initial value 损耗角正切：不超过规定值 Dissipation Factor:Not More than the specified value 外观：无明显异常 Appearance:No remarkable abnormality



SMD导电聚合物铝固体电容器
SMD Conductive Polymer Aluminum Solid Capacitors(OS-CON)

4、性能试验 CHARACTERISTICS

NO.	试验项目 ITEMS	试验条件 CONDITIONS	特性规格 SPECIFICATIONS
4.3	低温放置 STORAGE AT LOW TEMPERATURE	* 温度: $-55^{\circ}\text{C}\pm 2^{\circ}\text{C}$ TEST TEMPERATURE * 持续时间: 500^{+24}_{-0} Hours TEST TIME * 试验后在常温中放置1~2小时后 测量 THE CAPACITORS SHALL THEN BE REMOVED FROM THE CHAMBER AND STABILIZED AT ROOM TEMPERATURE FOR 2 hrs. AFTER.	* 静电容量变化率: $\Delta C/C \leq \pm 10\%$ (与初始值相比) VALIATION OF CAPACITANCE: WITHIN $\pm 10\%$ OF THE VALUE BEFOR TEST * 损耗角正切值 $\text{TAN}\delta$: $\leq$ 规格值 DISSIPATION FACTOR: NOT MORE THAN THE SPECIFIED VALUE * 漏电流: $\leq$ 规格值以下 LEAKAGE CURRENT: NOT MORE THAN THE SPECIFIED VALUE * 外观: 无可见损伤及电解质漏出 APPEARANCE: NO REMARKABLE ABNORMALITY
4.4	高温负荷 (耐久性) LIFE TEST	* 温度: $+105^{\circ}\text{C}\pm 2^{\circ}\text{C}$ TEST TEMPERATURE * 持续时间: 2000小时 TEST TIME * 施加E额定电压并施加 额定纹波电流 APPLIED VOLTAGE: IN THE RANGE OF RATED DC VOLTAGE EVEN AFTER OVER-LAPPING THE SPECIFIED RIPPLE CURRENT * 额定纹波电流: 见前页 MAXIMUM PERMISSIBLE RIPPLE CURRENT	* 静电容量变化率: $\Delta C/C \leq \pm 20\%$ (与初始值相比) VALIATION OF CAPACITANCE: WITHIN $\pm 20\%$ OF THE VALUE BEFOR TEST * 损耗角正切值 $\text{TAN}\delta$: ≤ 1.5 倍规格值 DISSIPATION FACTOR: NOT MORE THAN 150% OF THE SPECIFIED VALUE * 漏电流: $\leq$ 规格值以下 LEAKAGE CURRENT: NOT MORE THAN THE SPECIFIED VALUE * 外观: 无可见损伤及电解质漏出 APPEARANCE: NO REMARKABLE ABNORMALITY
4.5	高温无负荷 (高温储存) SELFE LIFE TEST	* 温度: $+105^{\circ}\text{C}\pm 2^{\circ}\text{C}$ TEST TEMPERATURE * 持续时间: 1000 ± 48 小时 TEST TIME 试验结束后要对试验样品进行 电压处理后测试: 常温下施加 额定工作电压30min后放电, 在常温中放置24小时后测量 CONDITIONINC:FOLLOWING THIS PERIOD THE CAPACITORS SHALL BE REMOVED FROM THE TEST CHAMBAR AND BE ALLOWED TO STABILIZE AT ROOM TEMPERATURE .NEXT THEY SHALL BE CONNECTED TO A SERIES LIMITING RESISTOR(1K Ω) WITH DC. RATED VOLTAGE APPLIED FOR 30min.AFTER WHICH THE CAPACITORS SHALL BE DISCHARGED.	* 静电容量变化率: $\Delta C/C \leq \pm 20\%$ (与初始值相比) VALIATION OF CAPACITANCE: WITHIN $\pm 20\%$ OF THE VALUE BEFOR TEST * 损耗角正切值 $\text{TAN}\delta$: ≤ 1.5 倍规格值 DISSIPATION FACTOR: NOT MORE THAN 150% OF THE SPECIFIED VALUE * 漏电流: $\leq$ 规格值以下 LEAKAGE CURRENT: NOT MORE THAN THE SPECIFIED VALUE * 外观: 无可见损伤及电解质漏出 APPEARANCE: NO REMARKABLE ABNORMALITY
4.6	可焊性 SOLDERABILITY	浸渍时间 Solder press time: 2 ± 0.5 s 焊接温度 Solder temperature: $260 \pm 5^{\circ}\text{C}$	浸渍面积95%以上附着 At least 95% of Circumferential surface of the dipped portion of termination shall be covered with new solder



SMD导电聚合物铝固体电容器
SMD Conductive Polymer Aluminum Solid Capacitors (08-CON)

4、性能试验 CHARACTERISTICS

No.	项目 Items	条 件 Conditions	规 格 Specifications
4.7	耐振性 RESISTANCE TO VIBRATION	频率：10-55-10Hz/分 Frequency: From 10 to 55 Hz and return to 10 Hz,shall be transferred in 1 Min Total Amplitude:1.5mm 条件：X.Y.Z 方向各2小时 Direction and duration of vibration ： 3 orthogonal directions mutually each for 2 hours Total 6 hours.	静电容量测试时无接触不良，断线及短路，端子无机械损伤。 Capacitance: During the test,measured value to be stabilized(when measured several times within 30 min before completion of test) Appearance: No remarkable abnormality 静电容量变化：初始值的 ±5%以内 Capacitance change:Within ±5% of the initial value 外观无明显异常 No remarkable abnormality
4.8	耐焊接热 RESISTANCE TO SOLDERING HEAT	温度：350±10℃ Test Temperature:350±10℃ 时间：3.5±0.5s Test time:3.5±0.5s	漏电流：不超过规定值 Leakage current:Not more than the specified value 电容量变化：初测值的±10%以内 Capacitance Change :within±10% of the initial value 损耗角正切：不超过规定值 Dissipation Factor:Not More than the specified value 外观：Appearance:无明显异常 No remarkable abnormality



SMD导电聚合物铝固体电容器

SMD Conductive Polymer Aluminum Solid Capacitors (OS-CON)

4、性能试验 CHARACTERISTICS

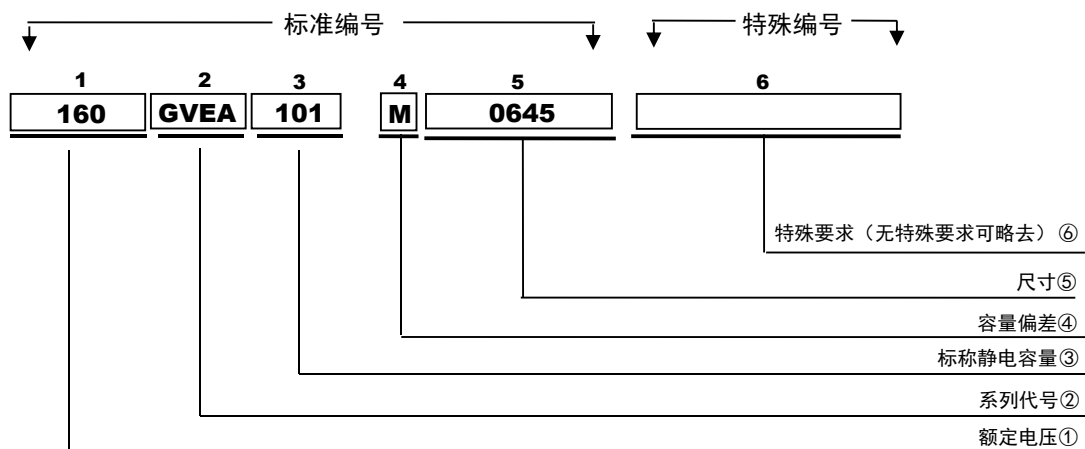
NO.	项目 Items	条 件 Conditions	规 格 Specifications
4.9	端子强度 TERMINAL	拉伸度 Tensile test intensity	线径 Diameter of terminal (mm)
		拉伸力 Tensile Strength (N)	维持时间 continued time
		0.3<d≤0.5	5
		0.5<d≤0.8	10
		0.8<d≤1.25	20
		弯曲强度 winding intensity	2回合 (2bends)
4.10	储存条件 STORAGE CONDITION	线径 Diameter of terminal (mm)	弯曲力 Tensile Strength (N)
		锥质量 Awl quality	
		0.3<d≤0.5	2.5
		0.5<d≤0.8	5
		0.8<d≤1.25	10
		0.75kg	0.51kg
4.11	其它项目 OTHER	按JISC5141 或 GB 5993-91执行	
		JISC5141 OR GB 5993-91	

SMD导电聚合物铝固体电容器

SMD Conductive Polymer Aluminum Solid Capacitors (OS-CON)

品 号 的 构 成

PART NUMBERING SYSTEM



①额定电压

额定电压 (V)	代 号
	第1位
6.3	6R3
7.5	7R5
10	100
12	120
16	160
25	250
35	350

②系列代号

系列名	代 号
	第2位
GVEA	GVEA
GVEP	GVEP
GV5K	GV5K
GVHT	GVHT

③标称静电容量

容量 (uF)	代 号
	第3位
3.3	3R3
47	470
100	101
680	681
1000	102
1500	152

④容量偏差

容量偏差 (%)	代号
	第9位
± 20	M

⑤尺寸

直径 (mm)	高度 (mm)	代 号
		第5位
5	6	0506
6.3	4.5	0645
6.3	10	0610
8	7	0807
8	10	0810
8	12	0810
10	12	1012

⑥特殊要求

[illegible]



SMD导电聚合物铝固体电容器
SMD Conductive Polymer Aluminum Solid Capacitors (OS-CON)

材質成份表 Component Composition Sheet

序号	材料名称	规格	(ICP)環境管理物質之測試結果 ppm (mg / Kg)						检测机构	证书号	备注
			Pb (鉛)	Cd (鎘)	Hg (汞)	Cr 6+ (六價鉻)	PBB (多溴聯苯)	PBDE 多溴化二苯 醚			
1	电容器	贴片型电容器	ND	ND	ND	ND	ND	ND	SGS	CANEC2303029602	

说明：1. ND表示未检（MDL），阴性=未检测到六价格