

DESIGN (设计)	CHECK (审核)	APPROVAL (批准)
刘志潜	方时斌	江安

CUSTOMER: _____
(客户)

DATE: February 26, 2019
(日期)



- PLEASE RETURN ONE SET OF APPLICATION TO US AFTER SIGNING ON THE BELOWING SPACE FOR APPROVAL IF YOU APPROVE OUR SAMPLES AND APPLICATIONS
(请于承认 签回此单)

PART NAME **CERAMIC RESONATOR**
(产品名称)

MODEL **CRB455E**
(型号)

CUSTOM PART NO
(客户部品号)

CUSTOM MODEL **CRB455E**
(客户型号)

APPROVED BY (承认印)	REMARK (注记)


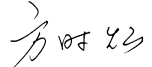

NO: GG-077

DATE: February 26, 2019

SPECIFICATION FOR CERAMIC RESONATOR

(陶瓷谐振器规格书)

MODEL NAME: CRB455E

Approved by (批准)	Checked by (审核)	Issued by (签发)	Drawn by (制图)	Issue Date (签发日期)
		刘志潜		1999.8.25

1. **SCOPE** (范围)

This specification is applied to the ceramics resonator used for communication.

(本规格书适用于通讯用陶瓷谐振器。)

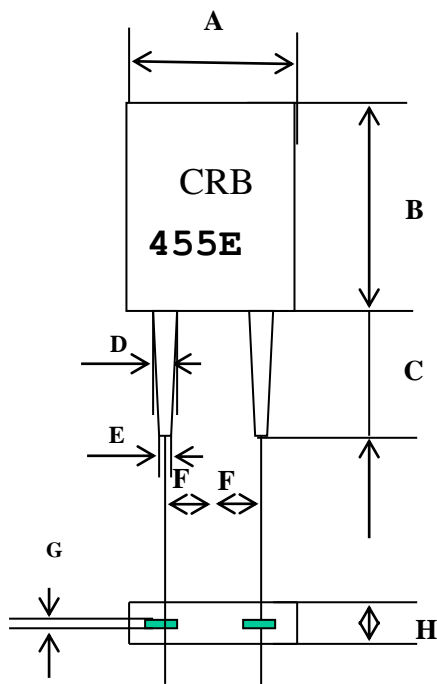
2. **MODEL NAME**

(产品名称)

Part Name (型号)	Customer's Part Number (客户型号)	Drawing No. (图号)
CRB455E		GG-077

3. **DIMENSIONS**

(尺寸)



UNIT : MM

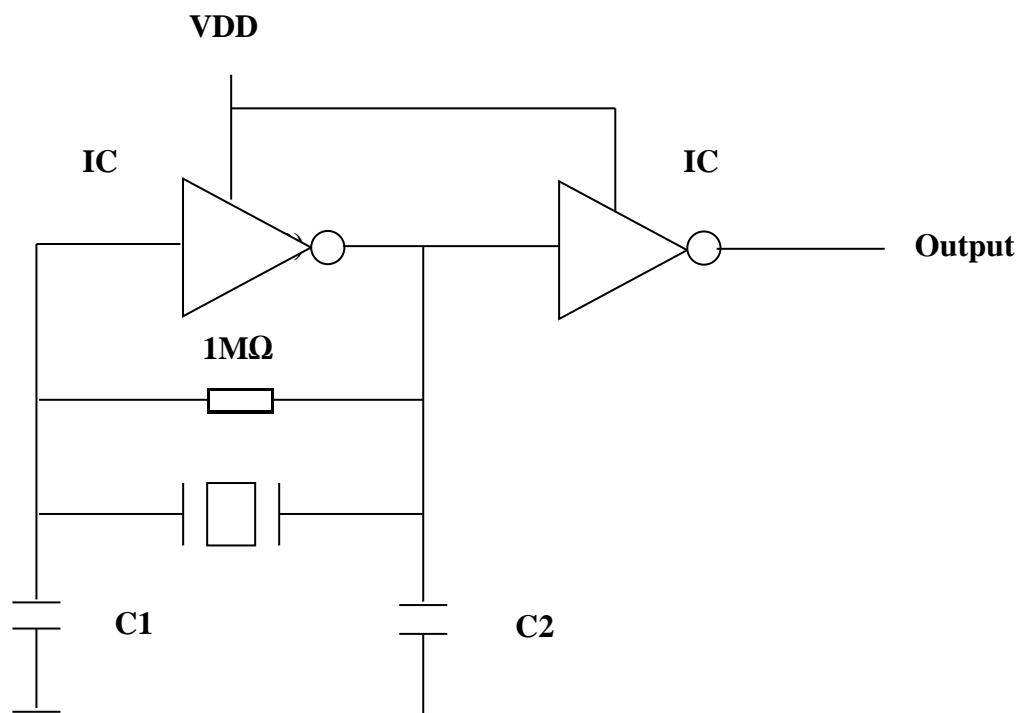
A	7.0±0.3
B	9.0±0.3
C	6.0±0.5
D	0.9±0.1
E	0.7±0.1
F	2.5±0.2
G	0.15±0.03
H	3.5±0.3

4. TEST CIRCUIT

(测试电路)

Parts shall be measured under a condition (Temp.: 3~35°C . Hum.: 45~85%) unless any necessity to measure under a standard condition (Temp.: 20 ± 2°C . Humi.: 65 ± 5%) is occurred.

(测量条件为温度 3~35°C，相对湿度 45~85%，必要时标准测量条件为温度 20 ± 2°C，相对湿度 65 ± 5%)



C1=C2=100PF

IC= 1/6CD4069UBE

VDD=+5V

5. ELECTRICAL CHARACTERISTICS

(电气性能)

	Item (项目)	Requirements (要求)
5-1	Center Frequency (fo) (中心频率)	455KHZ
5-2	Frequency Accuracy (频率精度)	Fc±2KHZ
5-3	Resonator Impedance (谐振阻抗)	20 Ω max
5-4	Operating Temperature Range (使用温度)	-20 TO +80 °C
5-5	Storage Temperature Range (储存温度)	-30 TO +85 °C
5-6	Withstanding Voltage (耐电压)	DC 100 V
5-8	Temperature Coefficient Of Center Frequency (-20~+80°C)	±0.3% max
5-9	Insulation Impedance (绝缘阻抗)	100 MΩ min
5-10	静电容	320 ± 20 %PF

6. PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

(物理及环境特性)

	Test Item (试验项目)	Condition of Test (试验条件)	Requirements (要求)
6-1	Lead Strength (引脚强度) Lead Pulling (引脚拉力) Lead Bending (引脚弯曲)	Applied to vertical weight 1Kg along with the direction of lead without any shock for 5-10sec. (沿引线方向加 10 牛顿静载荷 5-10 秒.) Filter lead shall be subjected to withstand against 90° bending its stem.This operation shall be done toward both diretion. (引脚折弯 90°,反方向同样。)	No mechanical damage and the measured values shall meet Item 5. (无机械损伤, 测量值足第 5 款要求.)
6-2	Solderability (可焊性)	Dip the terminals of the filter no closer than 1.5mm into a soldering bath(230±5°C) for 5±1 sec . (refer to MIL-STD-202E-208C) (端子至少 1.5mm 应浸没在 (230±5°C) 锡池内 5±1 秒。)	The solder shall be for coat at least 95% of the terminal surface (端子表面 95%被浸润)
6-3	Vibration (振动)	Filter shall be measured after being applied vibration as below (在下面条件下振动后测试) Vibration Freq: 10-55HZ (振动频率) Amplitude : 1.5 mm (幅度) Directions : 3 axial directions (方向) (3 轴向) Time : 1 hour/each direction (时间) (1 小时/各方向)	No visible damage and the measured value shall meet table 1 (无可见损伤且测量值满足表 1)
6-4	Random Drop (任意跌落)	Filter shall be measured after 3 times random dropping from the height of 76 cm. concrete floor. (3 次 76 c m 高度跌落到水泥地板后测试)	
6-5	Resistance to Soldering Heat (耐焊接热)	Filter immersing the terminals up to 1.5 mm to filter's body in soldering bath (350 ±10°C) for 3 sec., filter shall be measure after being placed in natural condition for 1 hour. (端子在 (350±10°C) 锡池内浸没到器件根部 1.5mm, 时间 3 秒, 自然条件放置 1 小时后测试。)	The measured value shall meet table 1. (测量值满足表 1)

6. PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS (续上页)
(物理及环境特性)

	Test Item (试验项目)	Condition of Test (试验条件)	Requirements (要求)
6-6	Humidity (湿度)	After being placed in a chamber (Humidity: 90-95% RH Temp.: 40 ± 2°C) for 100 hours filter shall be measured after placed in natural condition for 1 hour (相对湿度 90-95% 温度 40 ± 2°C 容器中放置 100 小时, 自然条件放置 1 小时后测试。)	The measured value shall meet Table 1. (测量值应满足表 1)
6-7	Life Test (High temperature) (寿命试验) (高温)	After being placed in a chamber 85±2°C for 100 hours ,filter shall be measured after being placed in natural condition for 1 hour. (温度 85± 2°C 容器中放置 100 小时, 自然条件放置 1 小时后测试。)	
6-8	Life Test (Low temperature) (寿命试验) (低温)	Placed in a chamber (Temp:-55± 2°C) for 100 hours,filter shall be measured placed in natural condition for 1 hour . (温度-55±2°C 容器中放置 100 小时, 自然条件放置 1 小时后测试。)	
6-9	Thermal Shock (温度冲击)	After temperature cycling of -55°C (30 minutes) to +85°C (30 minutes) was performed 5 times with a transfer time 15 min filter shall be measured after being placed in natural condition for 1 hour. (温度-55°C (30 分钟) 至+85°C (30 分钟) 循环 5 次, 15 分钟 1 次, 自然条件放置 1 小时后测试。)	

6. PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS (续上页)
(物理及环境特性)

Item (项目)	Limit Value (极限值)
※ Center Frequency (中心频率)	<u>±</u> 1.0 kHz max

※ Note: The limits in the above table are referenced to the initial Measurements. (表中的限值参照初始测量值)

7. NOTICE

(注意)

- 7.1 Ceramic filter should be stored in storeroom .And the surrouding atmosphere is acidless,alkali-free and no other harmful impurity.**
(器件应贮藏在贮藏室, 周围环境无酸、碱性腐蚀或其它有害气体.)
- 7.2 The package for ceramic filter should be avoid the hit by rain and Snow,also the mechanical damage.**
(包装应避免风雪、雨水的侵袭以及机械伤害.)
- 7.3 This specification limits the quality of the component as a single unit .Please make sure that the component is evaluated and confirmed the drawing When it is mounted to your product.**
(本规格书只规定了部件本身的质量。应用于您的产品时。请确认图纸该部件是否等效.)