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APPROVAL SHEET

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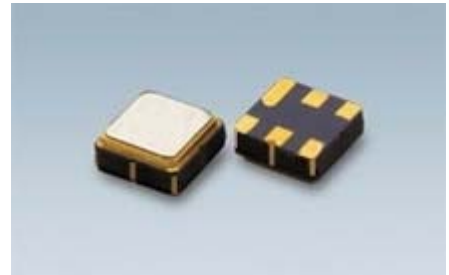


| | | |
|----------|---|-----------|
| Part No. | : | R315M |
| Pages | : | 6 |
| Date | : | 2013/4/22 |
| Revision | : | 1.0 |

| | |
|---------------------|--|
| Prepared by: | |
| Checked by: | |
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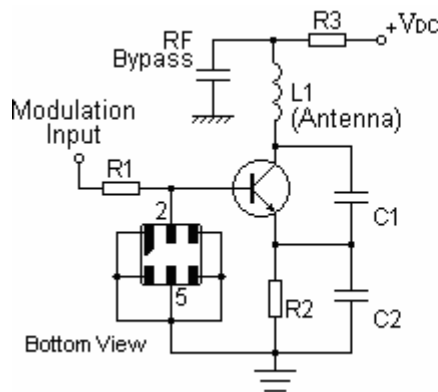
Features

- 1-port Resonator
- Ceramic Package for **Surface Mounted Technology (SMT)**
- **RoHS** compatible
- Package size 3.00x3.00x1.25mm³
- Package Code DCC6C
- **Electrostatic Sensitive Device(ESD)**

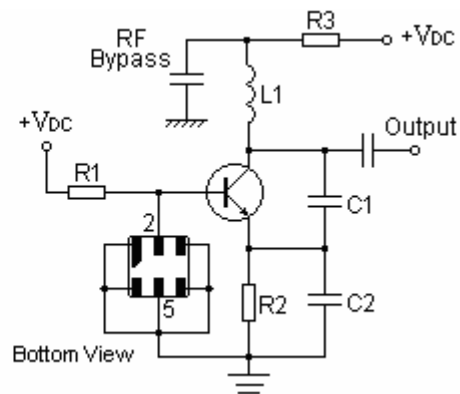


Application

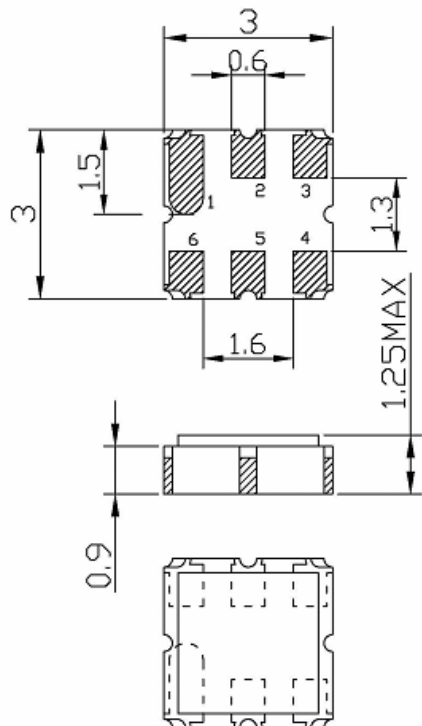
Typical Low-Power Transmitter Application



Typical Local Oscillator Application



Package Dimensions (DCC6C)



Pin Configuration

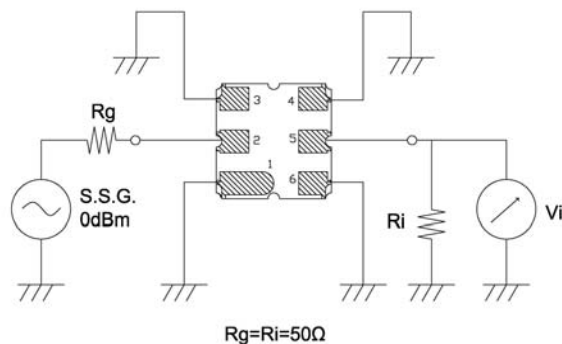
| | |
|----------------|--------|
| 2 | Input |
| 5 | Output |
| 1,3,4,6 | Ground |

Marking

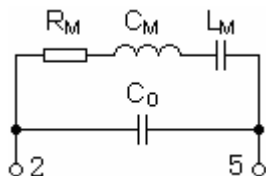


| | |
|------|---------------|
| R | SAW Resonator |
| 315M | Part number |

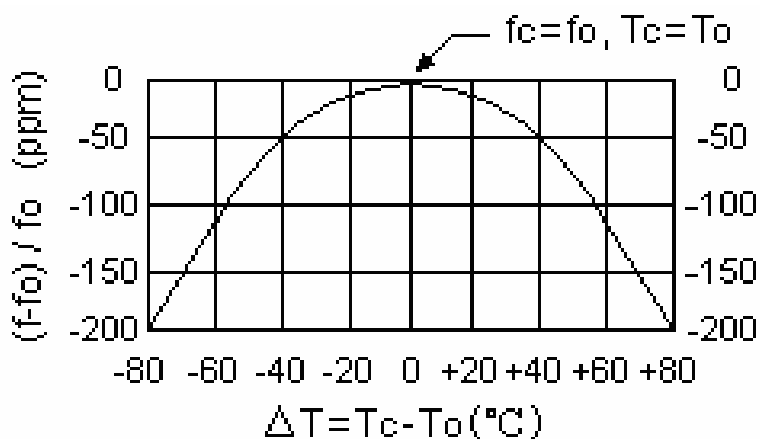
Test Circuit



Equivalent LC Model



Temperature Characteristics



The curve shown above accounts for resonator contribution only and does not include LC component temperature contributions.

Performance

Maximum Rating

| Item | | Value | Unit |
|-----------------------|-----------|------------|------|
| DC Voltage | V_{DC} | 10 | V |
| Operation Temperature | T | -40 ~ +85 | °C |
| Storage Temperature | T_{stg} | -55 ~ +125 | °C |
| RF Power Dissipation | P | 10 | dBm |

Electronic Characteristics

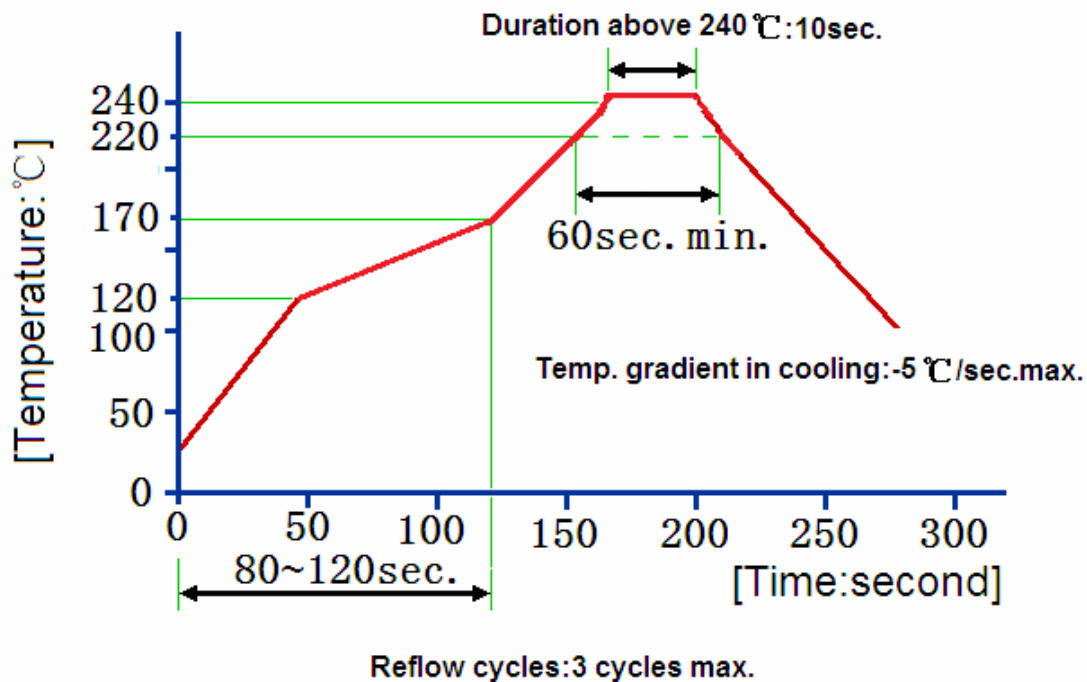
Test Temperature: $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$

Terminating source impedance: 50Ω

Terminating load impedance: 50Ω

| Item | | | Minimum | Typical | Maximum | Unit |
|---|--------------------------------------|--------------|---------|-----------|---------|---------------|
| Center Frequency | Absolute Frequency | f_c | | 315.000 | | MHz |
| | Tolerance from 315.000MHz | Δf_c | | ± 75 | | KHz |
| Insertion Loss(min) | | IL | | 1.4 | 1.9 | dB |
| Quality Factor | Unloaded Q | Q_U | | 15000 | | |
| | 50Ω Loaded Q | Q_L | | 2221 | | |
| Temperature Stability | Turnover Temperature | T_0 | 25 | 40 | 55 | °C |
| | Turnover Frequency | f_0 | | f_c | | |
| | Frequency Temperature Coefficient | FTC | | 0.032 | | ppm/°C |
| Frequency Aging | Absolute Value during the First Year | $ f_A $ | | ≤ 10 | | ppm/yr |
| DC Insulation Resistance between Any Two Pins | | | 1.0 | | | $M\Omega$ |
| RF Equivalent RLC Model | Motional Resistance | R_M | | 16.6 | 23.5 | Ω |
| | Motional Inductance | L_M | | 129.00 | | μH |
| | Motional Capacitance | C_M | | 1.95 | | fF |
| | Static Capacitance | C_0 | 2.80 | 3.00 | 3.20 | pF |

Recommended Reflow Soldering Diagram



Notes

1. As a result of the particularity of inner structure of SAW products, it easy to be breakdown by electrostatic, so we should pay attention to **ESD protect** in the test.
2. **Static voltage** between signal load and ground may cause deterioration and destruction of the component. Please avoid static voltage.
3. **Ultrasonic cleaning** may cause deterioration and destruction of the component. Please avoid ultrasonic cleaning.
4. Only leads of component may **be soldered**. Please avoid soldering another part of component.
5. There is a close relationship between the device's performance and **matching network**. The specifications of this device are based on the test circuit shown above. L and C values may change depending on board layout. Values shown are intended as a guide only.

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