



Total Solution Provider in Saw Device

SD-0455Q3-C80

LTE 450 SAW DUPLEXER For 455.0 MHz / 465.0 MHz
Revision 0: February 2014



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-

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□ Electrical Characteristics

Maximum Ratings

| Parameters Description | Unit | Minimum | Typical | Maximum |
|--|-----------------|-----------|---------|---------|
| Operation Temperature Range | °C | -20 | - | +90 |
| Storage Temperature Range | °C | -40 | - | +90 |
| Maximum DC Voltage | V | 0 | | |
| Input Power Level | dBm | 28 | - | 30 |
| Antenna Impedance(single ended) ⁽¹⁾ | Ω | 50 | | |
| Tx Impedance(single ended) ⁽¹⁾ | Ω | 50 | | |
| Rx Impedance(single ended) ⁽¹⁾ | Ω | 50 | | |
| Package type | C80 | | | |
| Length x Width | mm ² | 3.0 x 2.5 | | |
| Height | mm | 0.68 | | |

Electrical Specification

| Tx (455.0MHz)→ Ant | Specifications | | | |
|--|-------------------|---------|---------|---------|
| Parameters Description | Unit | Minimum | Typical | Maximum |
| Insertion Loss within 452.75 ~ 457.25 MHz Avg over full inner 4.5 MHz | dB | - | 1.4 | 2.5 |
| Amplitude Ripple within 452.75 ~ 457.25 MHz | dB _{p-p} | - | 0.8 | 1.5 |
| VSWR(Tx Port) within 452.75 ~ 457.25 MHz | - | - | 1.6 | 2.0 |
| VSWR(Ant. Port) within 452.75 ~ 457.25 MHz | - | - | 1.6 | 2.0 |
| Absolute Attenuation: | | | | |
| 10.0 ~ 430.0 MHz | dB | 25 | 30 | - |
| 442.75 ~ 447.25 MHz (Rx Image Band) | dB | 25 | 32 | - |
| 462.75 ~ 467.25 MHz (Rx Band Rejection) | dB | 45 | 60 | - |
| 480.0 ~ 1100.0 MHz (Including 2 nd harmonic) | dB | 25 | 30 | - |
| 1200.0 ~ 1500.0 MHz (Including 3 rd harmonic) | dB | 30 | 35 | - |
| 1500.0 ~ 1600.0 MHz (Including GPS/GLONASS) | dB | 35 | 40 | - |
| 1600.0 ~ 4000.0 MHz (Including DCS band) | dB | 18 | 22 | - |
| 4000.0 ~ 8500.0 MHz | dB | 10 | 15 | - |

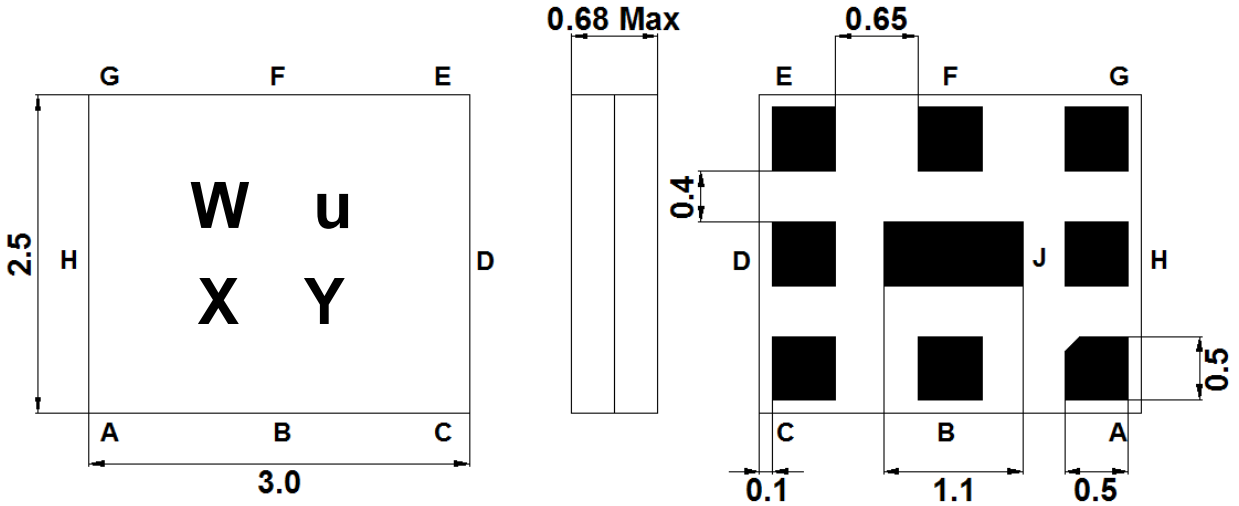


| Ant → Rx (465.0MHz) | Specifications | | | |
|---|-------------------|---------|---------|---------|
| Parameters Description | Unit | Minimum | Typical | Maximum |
| Insertion Loss within 462.75 ~467.25 MHz Avg over full inner 4.5 MHz | dB | - | 1.8 | 2.5 |
| Amplitude Ripple within 462.75 ~467.25 MHz | dB _{p-p} | - | 1.1 | 1.5 |
| VSWR(Rx Port) within 462.75 ~ 467.25 MHz | - | - | 1.6 | 2.0 |
| VSWR(Ant. Port) within 462.75 ~ 467.25 MHz | - | - | 1.8 | 2.1 |
| Absolute Attenuation: | | | | |
| 10.0 ~ 451.0 MHz | dB | 35 | 40 | - |
| 452.75 ~ 457.25 MHz (Tx Band Rejection) | dB | 40 | 45 | - |
| 475.0 ~ 480.0 MHz (Tx Image Rejection) | dB | 40 | 60 | - |
| 481.0 ~ 8500.0 MHz | dB | 10 | 15 | - |

| Tx → Rx | Specifications | | | |
|--|----------------|---------|---------|---------|
| Parameters Description | Unit | Minimum | Typical | Maximum |
| Isolation within 452.75 ~457.25 MHz Avg over full inner 4.5 MHz | dB | 45 | 55 | - |
| Isolation within 462.75 ~467.25 MHz Avg over full inner 4.5 MHz | dB | 50 | 65 | - |

Notes : (1) With Matching Network .

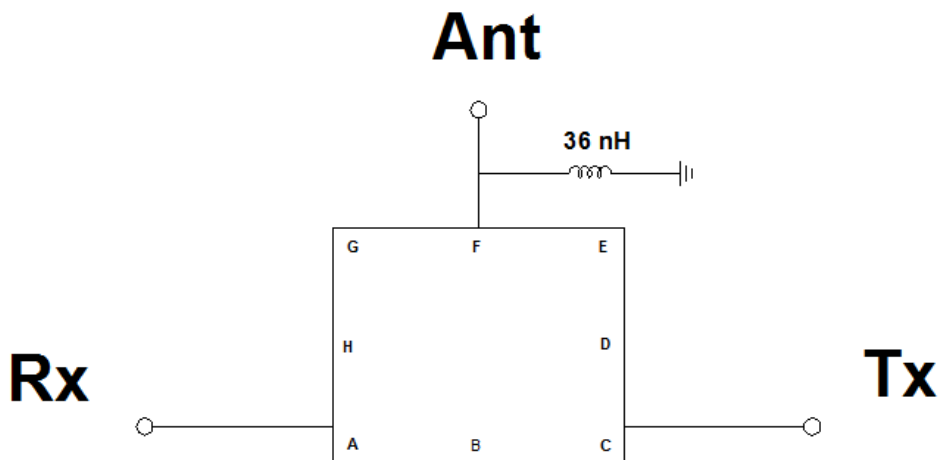
Package Dimensions



| Marking Descriptions | |
|----------------------|--------------------|
| W | LTE450 Application |
| u | Series Number |
| X | Date Code(Year) |
| Y | Date Code(Month) |

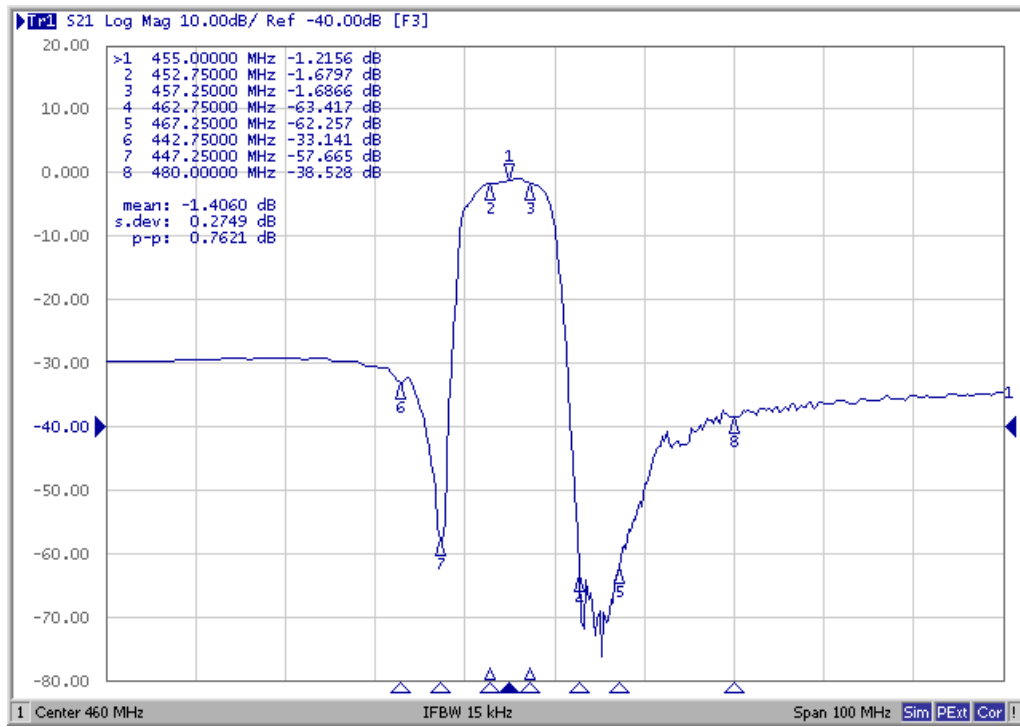
| Pin Description | |
|------------------|--------------|
| B, D, E, G, H, J | Ground |
| F | Antenna |
| C | Tx(455.0MHz) |
| A | Rx(465.0MHz) |

Testing Environment

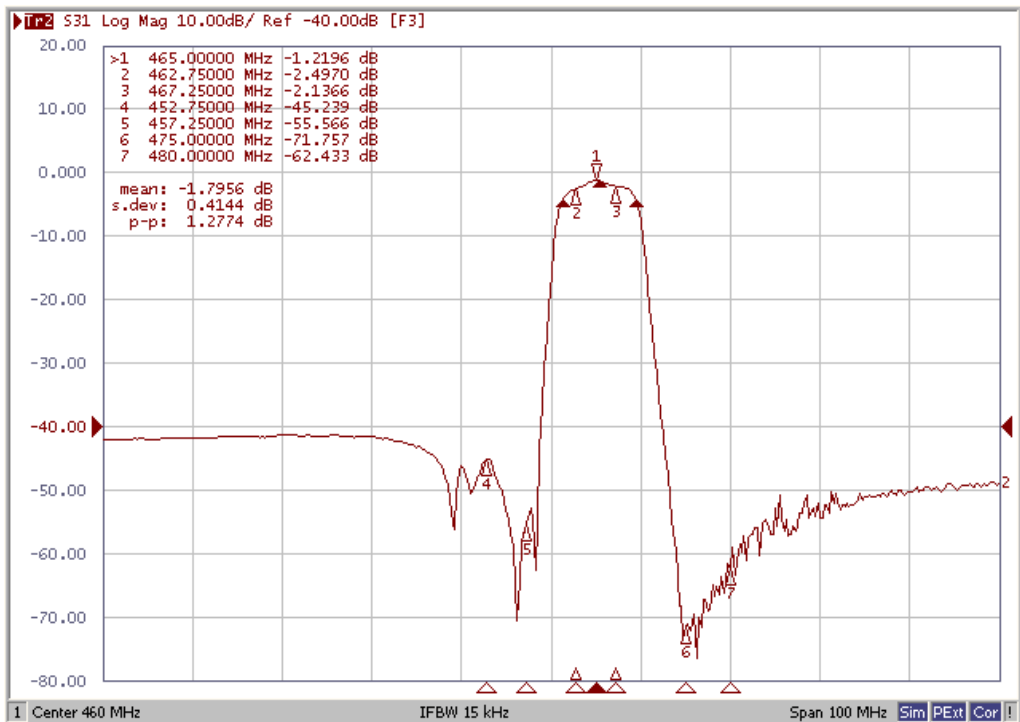


□ Frequency Characteristics

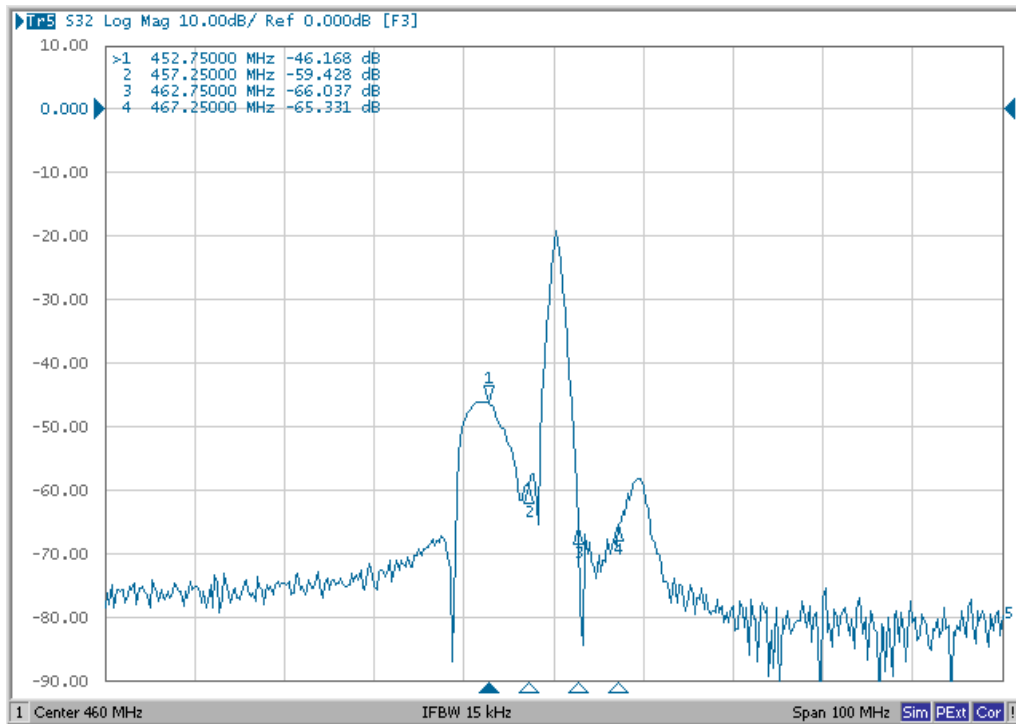
Tx to Ant



Ant to Rx

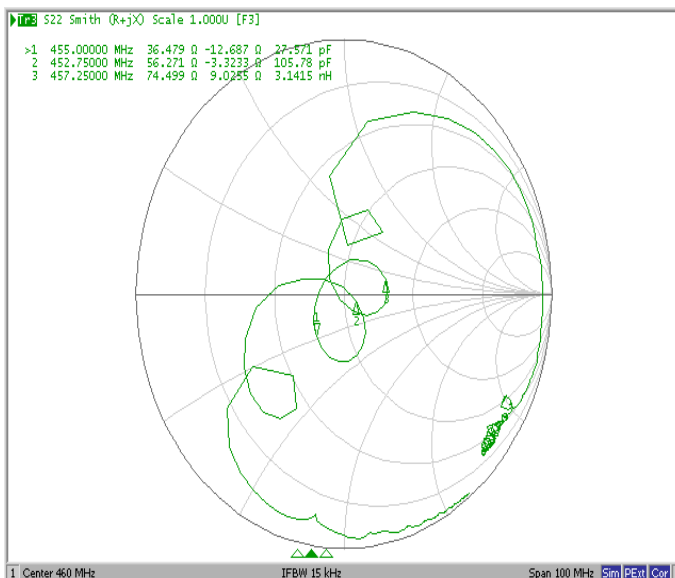


Isolation

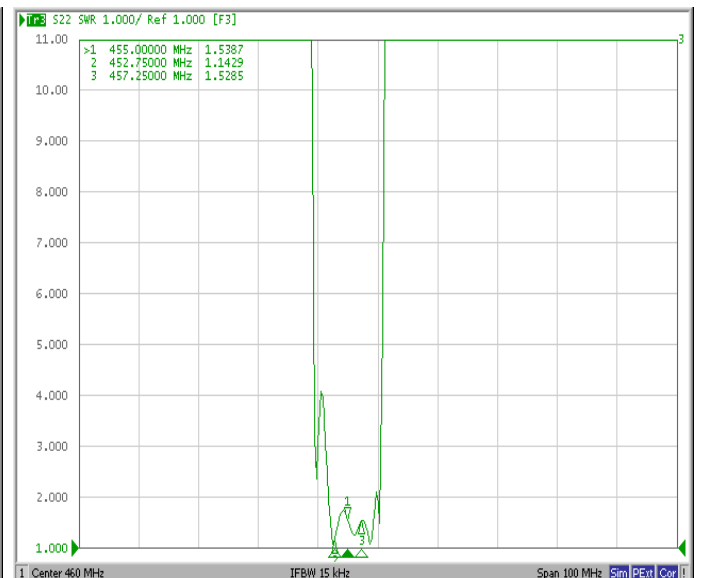


Tx Port

Smith Chart



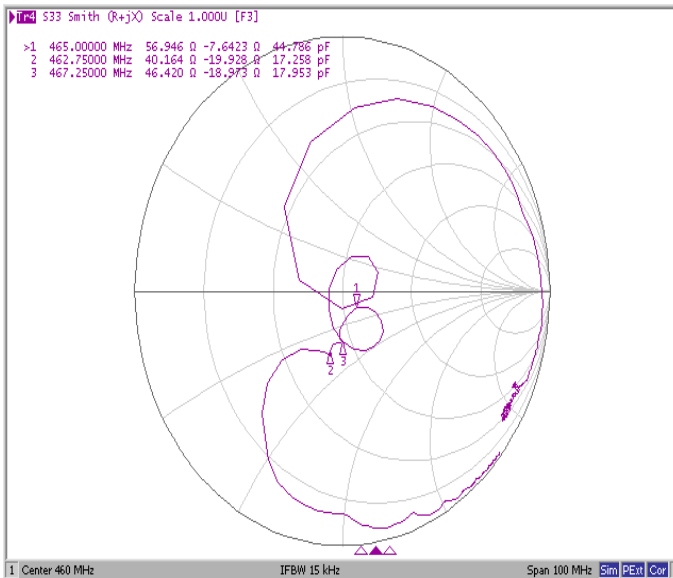
VSWR



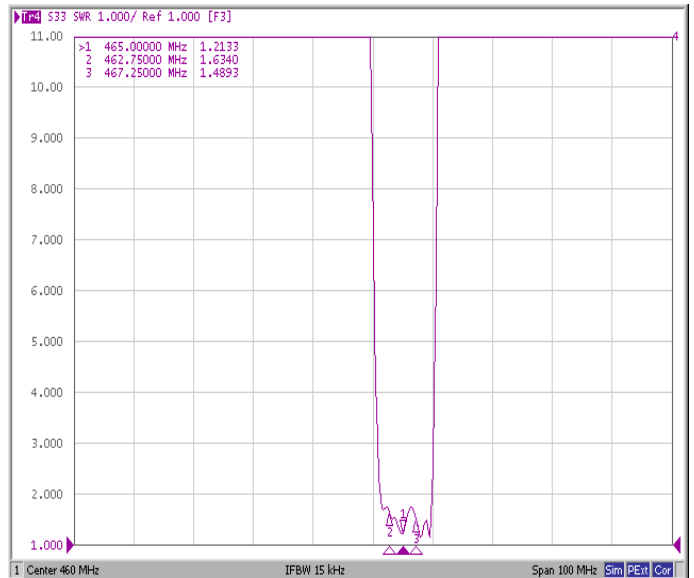


Rx Port

Smith Chart

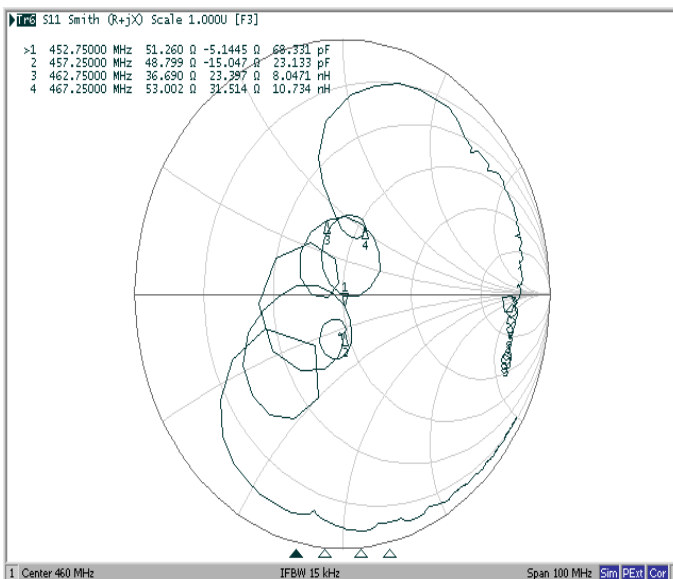


VSWR

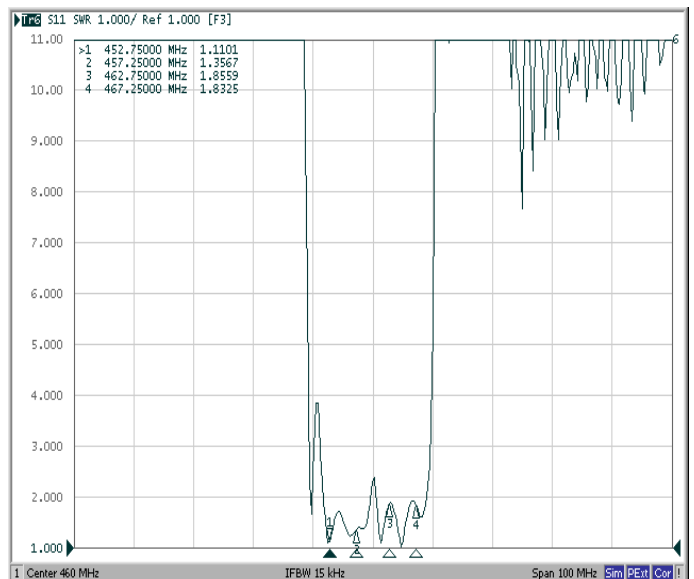


Ant Port

Smith Chart



VSWR





Wide Span

