



Total Solution Provider in Saw Device

SD417CK6

CDMA 450 Rx Balanced SAW DUPLEXER

For 417.75 MHz / 427.75 MHz



Revision 0: July 2011

- Electrical Characteristics
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 - Frequency Characteristics
-

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Electrical Characteristics

Maximum Ratings

| Parameters Description | Unit | Minimum | Typical | Maximum |
|--|-----------------|---|---------|---------|
| Operation Temperature Range | °C | -30 | - | +80 |
| Storage Temperature Range | °C | -40 | - | +85 |
| Maximum DC Voltage | V | 0 | | |
| Input Power Level | dBm | 29dBm > 50000 Hours, CW tone (Ta = +55°C) | | |
| Antenna & Tx Impedance (single ended) | Ω | 50 | | |
| Rx Impedance (balanced) ⁽¹⁾ | Ω | 100 | | |
| Package type | K6 | | | |
| Length x Width | mm ² | 5.0 x 5.0 | | |
| Height | mm | 1.8 | | |

Electrical Specification

| Tx → Ant | | Specifications | | | |
|------------------------|-----------------|----------------|---------|---------|---------|
| Parameters Description | Condition [MHz] | Unit | Minimum | Typical | Maximum |
| Insertion Loss | 415.5 ~ 420.0 | dB | - | 2.2 | 3.0 |
| VSWR | 415.5 ~ 420.0 | - | - | 1.6 | 2.2 |
| Absolute Attenuation | 0.3 ~ 400.0 | dB | 25 | 31 | - |
| | 425.5 ~ 430.0 | dB | 40 | 50 | - |
| | 430.0 ~ 1700.0 | dB | 15 | 18 | - |
| | 1700.0 ~ 2000.0 | dB | 10 | 17 | - |

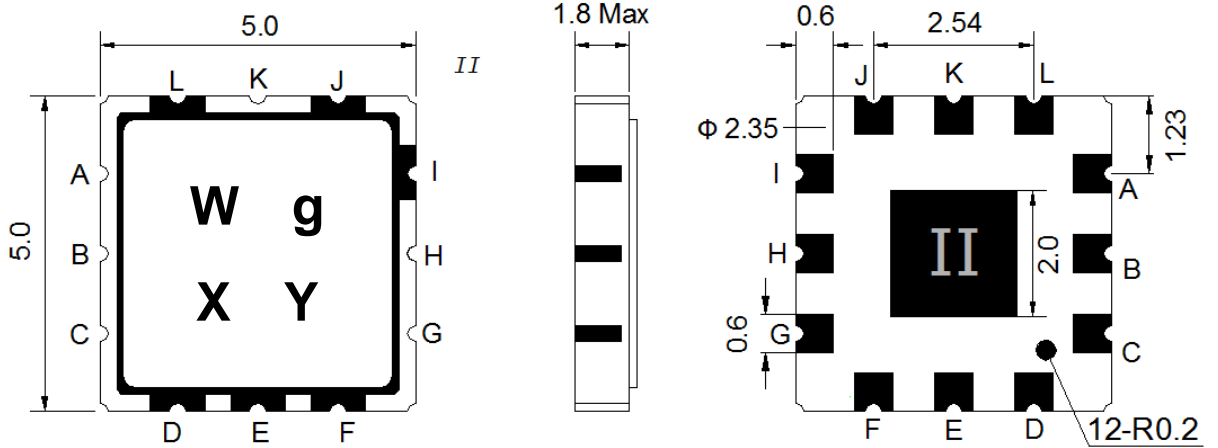


| Ant → Rx | | Specifications | | | |
|------------------------|-----------------|----------------|---------|----------|---------|
| Parameters Description | Condition [MHz] | Unit | Minimum | Typical | Maximum |
| Insertion Loss | 425.5 ~ 430.0 | dB | - | 3.2 | 3.8 |
| Amplitude Imbalance | 425.5 ~ 430.0 | dB | -1.0 | -0.6/0.4 | 1.0 |
| Phase Imbalance | 425.5 ~ 430.0 | deg | -15 | 8.0/9.5 | 15 |
| VSWR | 425.5 ~ 430.0 | - | - | 1.8 | 2.3 |
| Absolute Attenuation | 0.3 ~ 415.5 | dB | 45 | 53 | - |
| | 415.5 ~ 420.0 | dB | 45 | 53 | - |
| | 460.0 ~ 600.0 | dB | 40 | 50 | - |
| | 600.0 ~ 1200.0 | dB | 30 | 40 | - |
| | 1200.0 ~ 2000.0 | dB | 25 | 31 | - |

| Tx → Rx | | Specifications | | | |
|------------------------|-----------------|----------------|---------|---------|---------|
| Parameters Description | Condition [MHz] | Unit | Minimum | Typical | Maximum |
| Isolation | 415.5 ~ 420.0 | dB | 52 | 60 | - |
| | 425.5 ~ 430.0 | dB | 52 | 70 | - |

Notes : (1) With Matching Network .

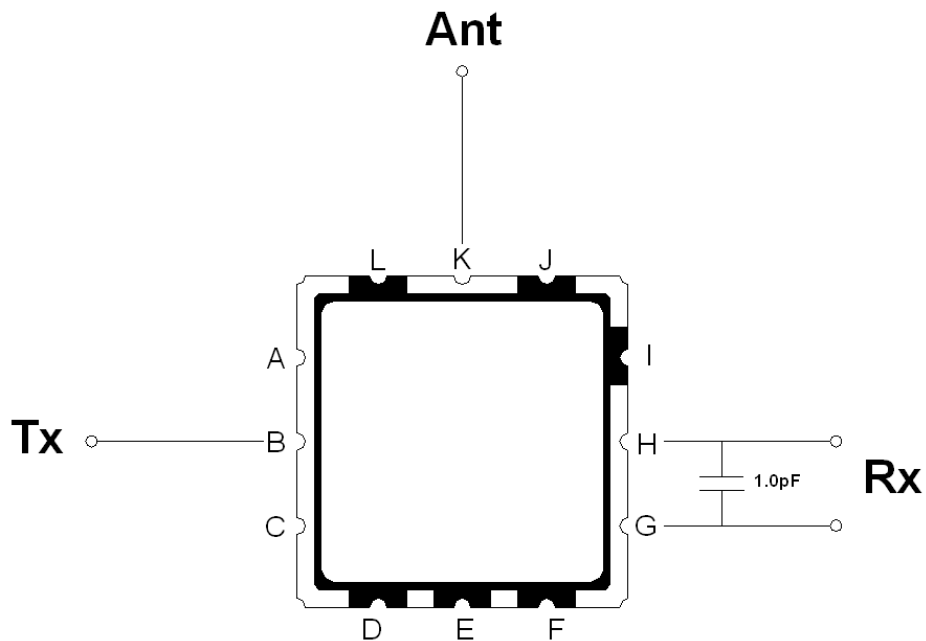
Package Dimensions



| Marking Descriptions | |
|----------------------|---------------------|
| W | CDMA450 Application |
| g | Series Number |
| X | Date Code(Year) |
| Y | Date Code(Month) |

| Pin Description | |
|------------------------|-------------|
| A, C, D, E, F, I, J, L | Ground |
| K | Antenna |
| B | Tx |
| G, H | Rx Balanced |

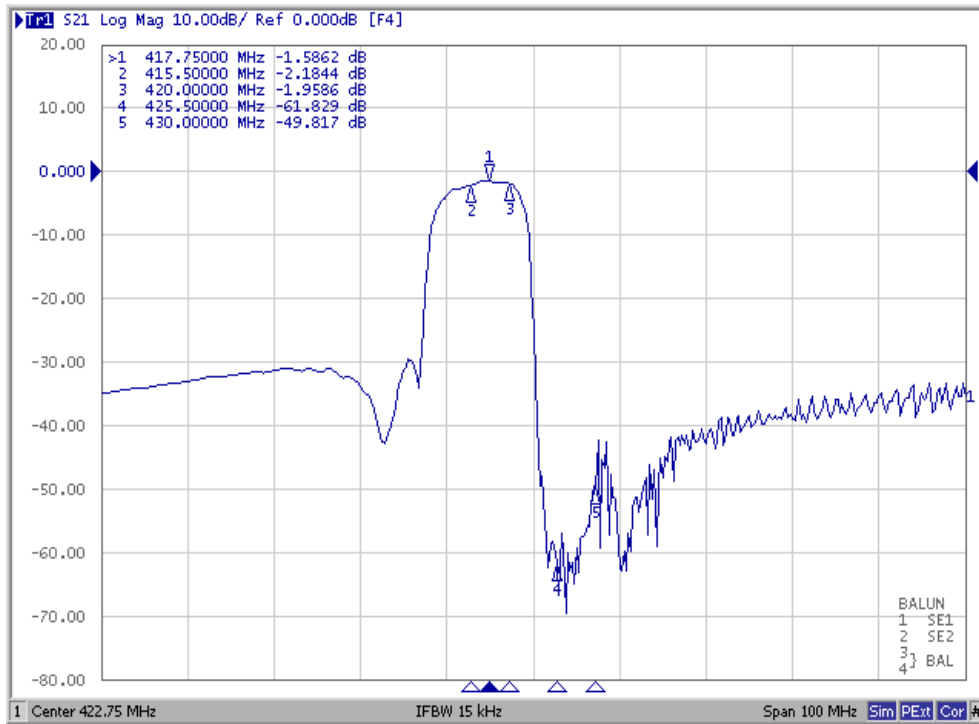
Testing Environment



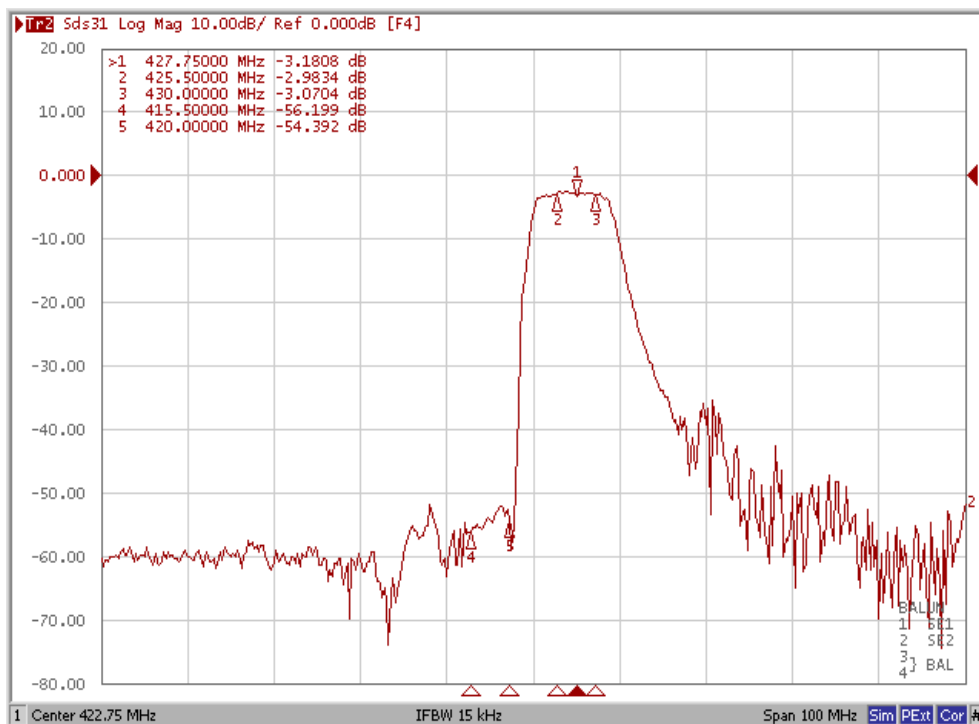


□ Frequency Characteristics

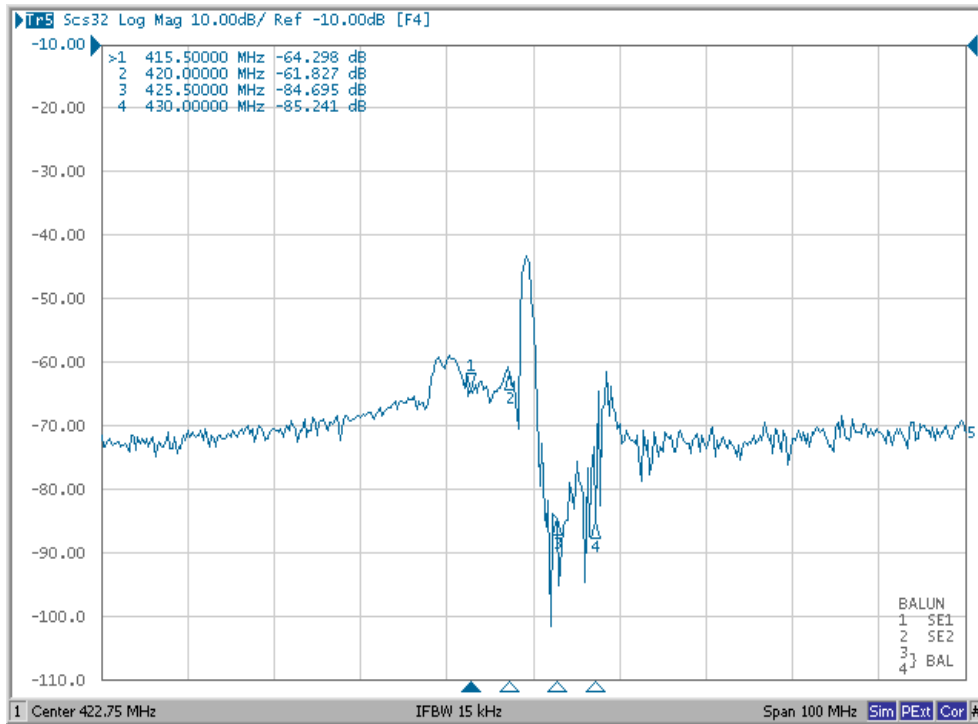
Tx to Ant



Ant to Rx

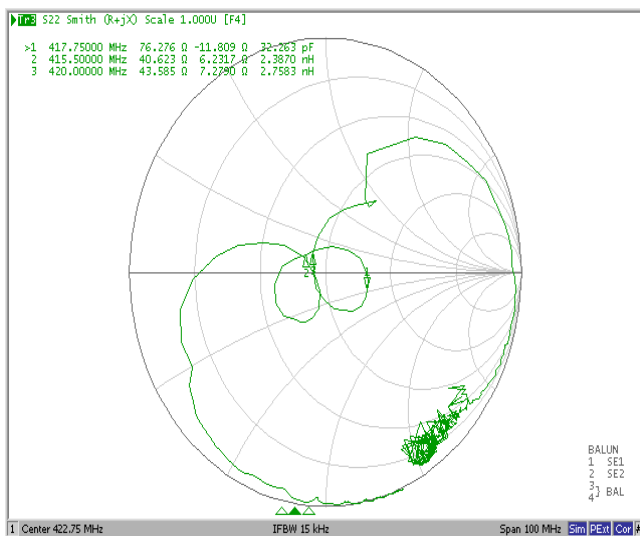


Isolation

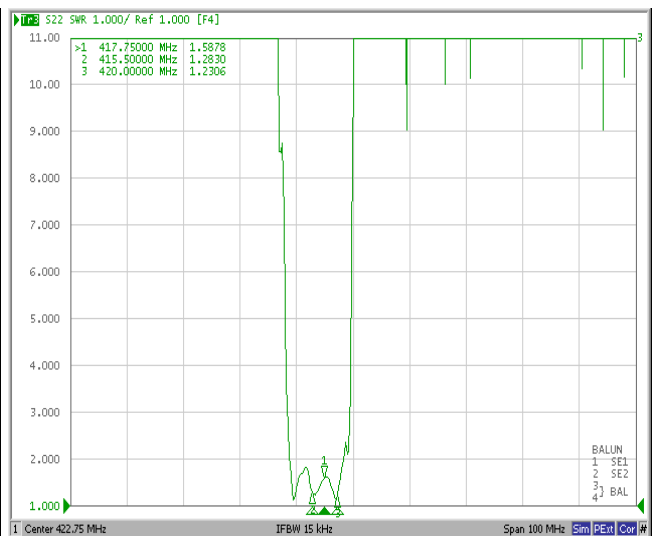


Tx Port

Smith Chart



VSWR

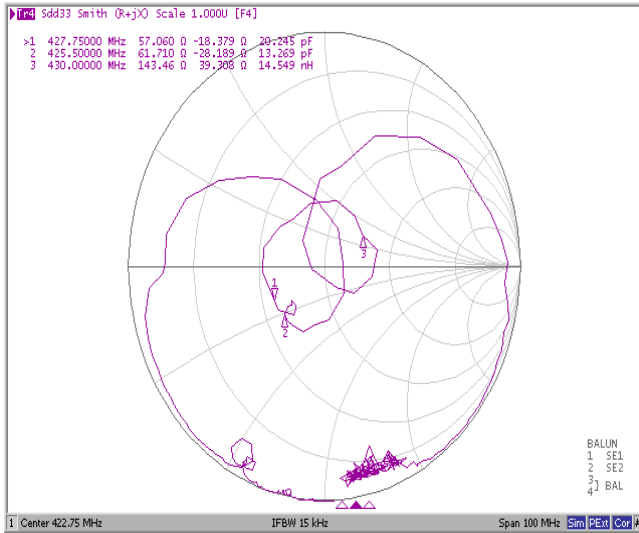




Rx Port

Smith Chart

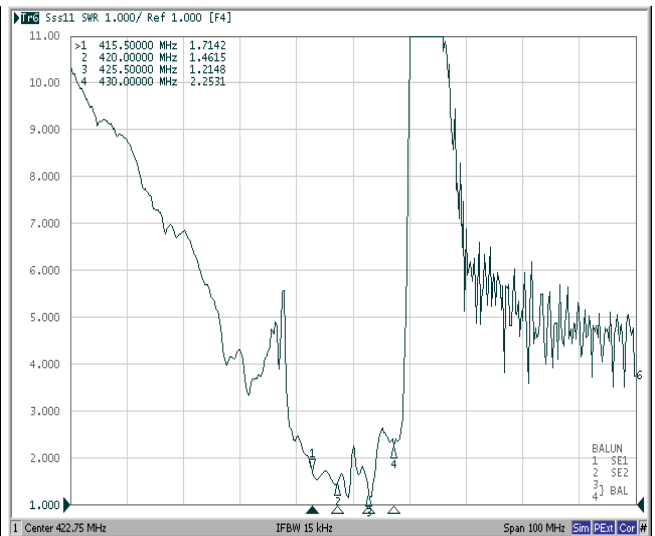
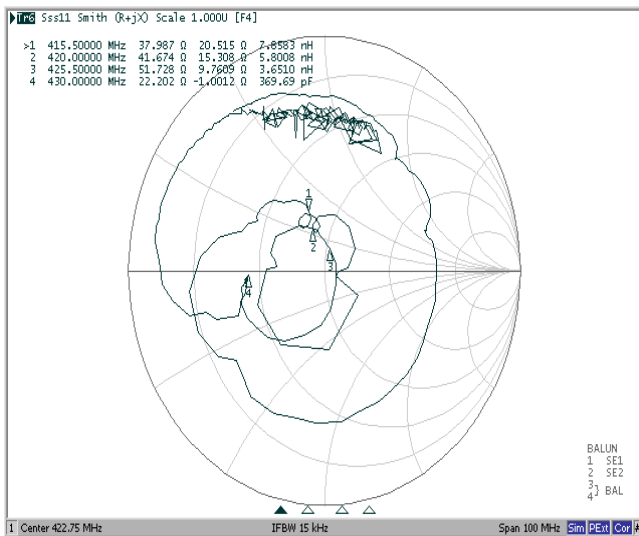
VSWR



Ant Port

Smith Chart

VSWR

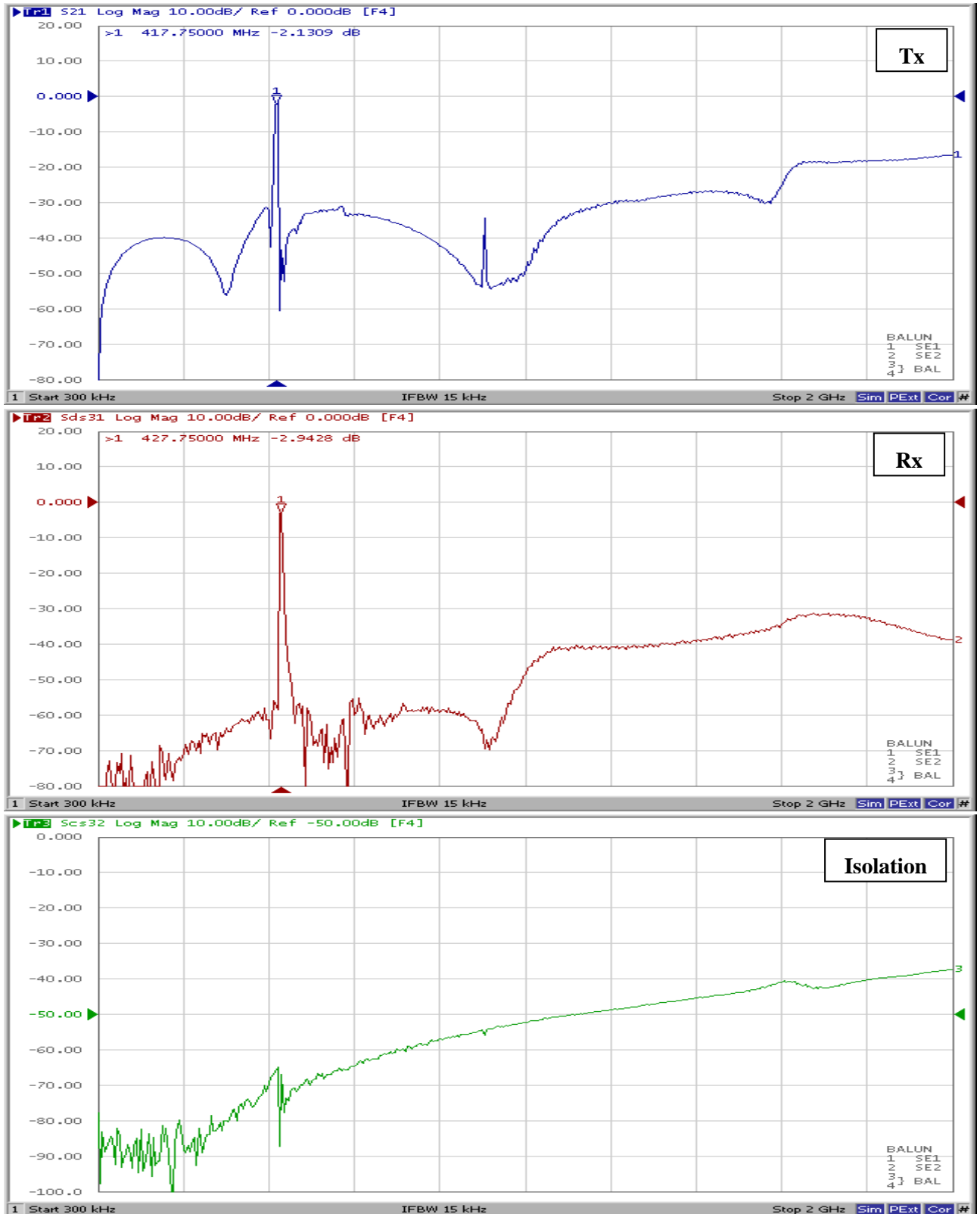




SD417CK6

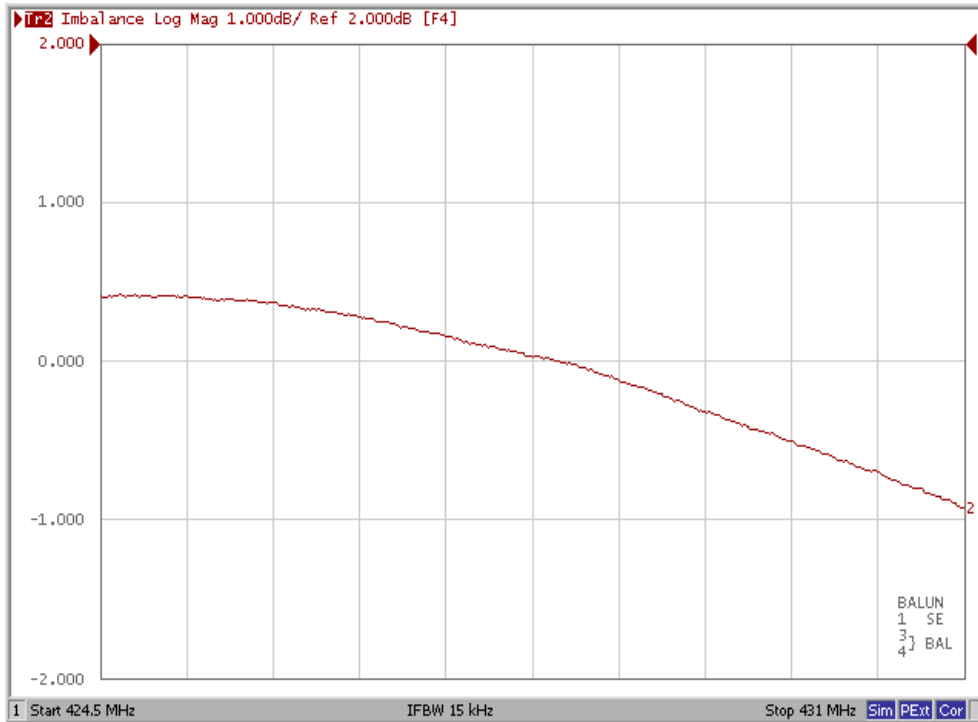
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Wide Span





Amplitude Imbalance



Phase Imbalance

