



QSR LNA 30MHz to 6GHz RF/IF Gain Block



FEATURES:

- ✓ Fixed gain of 22.2 dB
- ✓ Broad operation from 30 MHz to 6 GHz
- ✓ High dynamic range gain block Input and output
- ✓ Internally matched to 50 Ω
- ✓ Integrated bias circuit OIP3 of 40.0 dBm at 900 MHz
- ✓ P1dB of 21.0 dBm at 900 MHz
- ✓ Noise figure of 2.1 dB at 900 MHz Single
- ✓ 5 V power supply Low quiescent current of 94 mA
- ✓ Wide operating temperature range of -40°C to $+105^{\circ}\text{C}$
- ✓ Thermally efficient SOT-89 package ESD rating of ± 1.5 kV (Class 1C)





SYNERGY TELECOM PVT LTD

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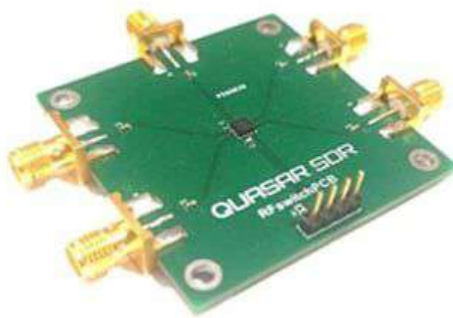
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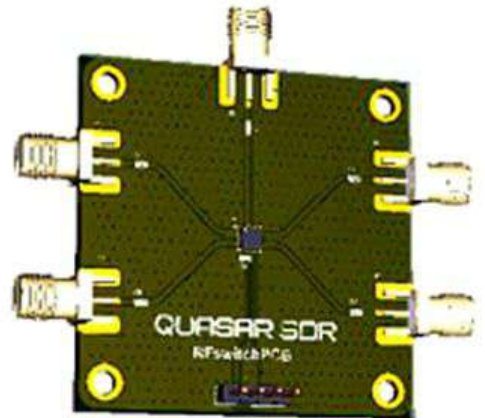
QSR POSTIVE CONTROL SWITCH

DC* - 8 GHz GaAs MMIC SP4T NON-REFLECTIVE



FEATURES:

- ✓ Broadband Performance: DC - 8 GHz
- ✓ High Isolation: 35 dB@ 6 GHz
- ✓ Low Insertion Loss: 2.0 dB@ 6 GHz
- ✓ Integrated Positive Supply 2:4 TTL Decoder
- ✓ 16 Lead 3x3mm QFN Package: 9 mm²



Absolute Maximum Ratings :

- ❖ Bias Voltage Range (Vdd) : +7.0 Vdc
- ❖ Control Voltage Range (A & B) : -0.5V to Vdd +1.0 V_i
- ❖ Channel Temperature : 150 °C
- ❖ Thermal Resistance (Insertion Loss Path) : 154 °C/W
- ❖ Thermal Resistance (Terminated Path) : 228 °C/W
- ❖ Storage Temperature : -65 to +150 °C
- ❖ Operating Temperature : -40 to +85 °C
- ❖ Maximum Input Power : +24 dBm
- ❖ ESD Sensitivity (HBM) : Class 1A





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QSR POSTIVE CONTROL SWITCH

DC* - 8 GHz GaAs MMIC SP4T NON-REFLECTIVE



FEATURES:

- ✓ Broadband Performance: 1- 6000MHz
- ✓ High Isolation: 35 dB@ 6 GHz
- ✓ Low Insertion Loss: 2.0 dB@ 6 GHz
- ✓ Integrated Positive Supply 2:4 TTL Decoder
- ✓ 16 Lead 3x3mm QFN Package: 9 mm²



PATH WISE FUNCTIONING:

1. PATH 1 (BPF 30-88MHz)
2. PATH 2 (Direct Path)
3. PATH 3 (BSF 88-108MHz) and (BPF 480MHz)
4. PATH 4 (LPF 30MHz)



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QSR HF SPLITTER (1-500 MHz)

2 Way HF Power Splitter

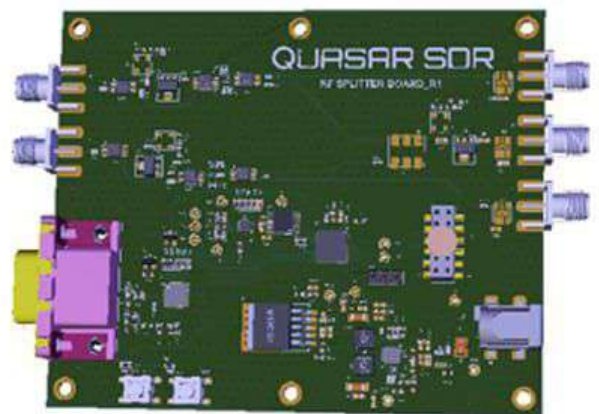


FEATURES:

- ✓ Frequency range 1-500MHz.
- ✓ Two input ports (A&B).
- ✓ Two output ports (A&B) AND One common input port.
- ✓ Low VSWR 2 way HF power Splitter 1-500MHz.
- ✓ Low Insertion Loss
- ✓ Wide band
- ✓ Widely used for In-building Solutions application.

Applications

- SDR
- Broadband
- Telecom receivers
- Low thermal resistance





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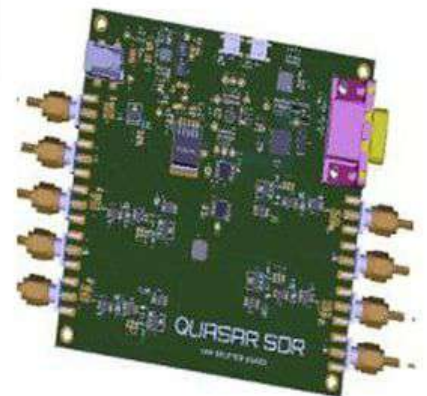
QSR UHF SPLITTER (500-6000 MHz)

4 Way Power Board



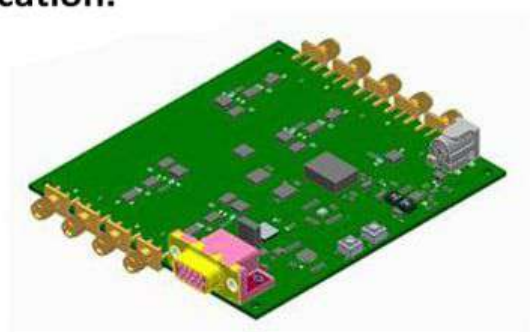
FEATURES:

- ✓ UHF splitter frequency range (500-6000MHz).
- ✓ Four input ports
- ✓ Four output ports AND One common input port.
- ✓ Low VSWR 2 way UHF power splitter 500-6000MHz.
- ✓ Low Insertion Loss
- ✓ Wide band
- ✓ Widely used for In-building Solutions application.



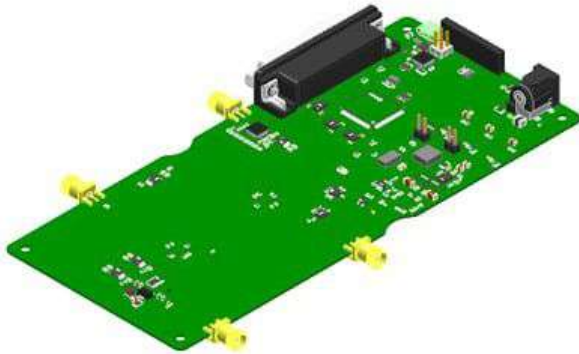
Applications

- ✓ SDR
- ✓ Broadband
- ✓ Telecom receivers
- ✓ Low thermal resistance



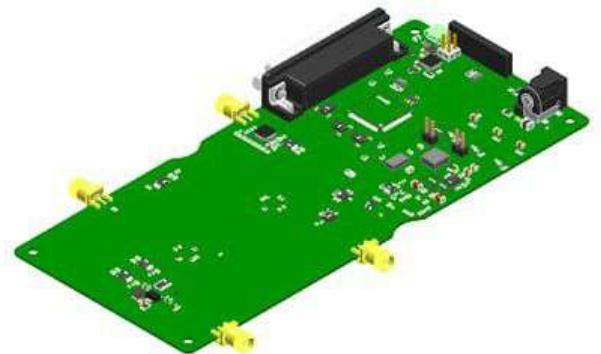


QSR FRONT END MODULE



FEATURES:

- ✓ Long Range (Ultra-Wide Band)
- ✓ Freq Range: 30MHz – 6GHz (Tx & Rx)
- ✓ Two Antenna Ports:
 - ✓ Port 1 - 30-512MHz (TX/RX)
 - ✓ Port 2 - 500MHz-6GHz (TX/RX)
- ✓ Transmitted Power: 1W (max)
- ✓ Tx Gain: 47 dBm
- ✓ Wide Input Voltage Range: 15V-35V DC
- ✓ Connectors: 50 Ohm SMA (Input & Output)
- ✓ Controls: D-Sub Connector (25 pin)





QSR UP DOWN CONVERTER



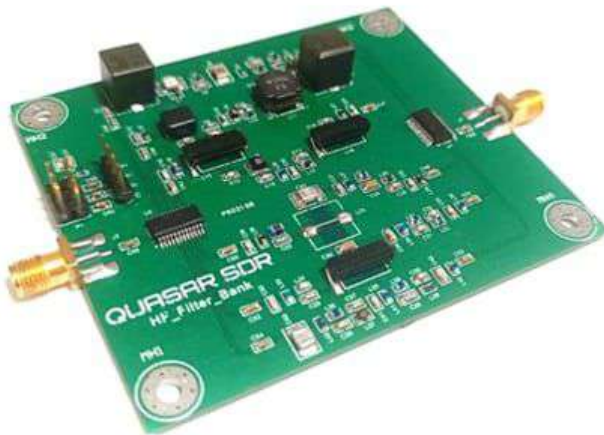
- ✓ Frequency range 1-70MHz.
- ✓ Two input ports (Tx and Rx)
- ✓ Two output ports (Tx and Rx)
- ✓ Tx input frequency 101 - 170 MHz
- ✓ Tx output frequency 1- 70 MHz : IF (Down conversion)
- ✓ Rx Input Frequency 1-70 MHz
- ✓ Rx Output Frequency 101 – 170 MHz : IF (Up Conversion)
- ✓ Widely used for In-building Solutions application.
- ✓ 100 MHz crystal LO

Applications

- SDR
- Telecom receivers



QSR HF FILTER BANK



FEATURES:

- ✓ HF Filter Frequency 1.6- 33 MHz
- ✓ High Isolation: 35 dB@ 33 MHz
- ✓ Low Insertion Loss: 2.0 dB@ 33 MHz

PATH WISE FUNCTIONING:

1. PATH 1 (1.6 – 2.5 MHz)
2. PATH 2 (2.5 – 4.7 MHz)
3. PATH 3 (4.7-7.5MHz)
4. PATH 4 (7.5- 14.5MHz)
5. PATH 5 (14.5- 21.5 MHz)
6. PATH 6 (21.5 – 33MHz)

