DSRMC06 Best Practices Receive Multicoupler

AC and DC-powered models

DSRMC06-Series Front & Rear Views, 8-Channel Model Shown

Features and Benefits

- **Low Noise Amplifier Design**—Quadrature-coupled LNA for optimum noise figure and excellent third order intercept.
- **Post Filter Ports** – enable use of a secondary filter for greater selectivity positioned after the LNA to minimize impact on the noise figure
- **30 dB Test Port**—Enables receiver sensitivity testing without disconnecting the RX path.
- **Adjustable Electronic Attenuator**—Adjustable 1-15 dB attenuator (1 dB steps) to optimize reserve gain of the system
- **Optional LNA-Fail Alarm Monitoring**—Provides dry contact for external alarming
- **Self-Terminating Splitter—**Unused ports on channel outputs require no termination
- **Input Power –** AC or DC Model available. AC models support a secondary 12 VDC power input for back-up

Specifications

Electrical Specifications

Frequency Range	**See Ordering Information**	
Number of Channels	See Ordering Information	
Gain & Noise Figure	**Gain (dB)**	**Noise Figure(dB)**
118 – 150 MHz	10.50 (+/-1)	2.7
150 – 174 MHz	10.00 (+/-1)	2.7
217 – 222 MHz	8.00 (+/-1)	2.7
380 – 420 MHz	11.00 (+/-1.6)	2.2
450 – 470 MHz	10.00 (+/-1.2)	2.2
470 – 512 MHz	9.00 (+/-1.6)	2.5
796 – 824 MHz	17.00 (+/-1)	1.5
896 – 901 MHz	15.25 (+/-1)	2
Low Noise Amplifier (LNA) Type	Quadrature Coupled	
Output IP3	>+40 dBm	
Adjustable Attenuator	Electronic, 0 – 15 dB, 0.5 dB steps	
Test Port Instrument Connection	30 dB Coupler, Front Panel BNC	
Post-LNA Filter Connections	Available on Rear Panel	
RX – RX Port Isolation	>20 dB	
Input / Output Return Loss	14 dB	
Power Input	90-240 AC or -48 VDC (36-72 VDC isolated)	

Mechanical Specifications

RF Connectors	✓ RF Input: N Female ✓ RF Outputs: BNC Female (rear) ✓ Test Port: BNC Female (front) ✓ Post Filter Ports: N female (rear)
Dry Contact Alarm Connector	Block Type
Mounting	19” x1.75” 1 RU Panel, depth 10.25”
Grounding Provision	¼-inch stud at Rear Panel
Temperature Range (no degradation)	✓ **0°C to +50° C**
Weight / Shipping Weight	6 Lb / 10 Lb

Ordering Information

Frequency Range		With LNA Alarm Function		No LNA Alarm Function	
		AC Model	DC Model	AC Model	DC Model
J	118-150 MHz	DSRMC06-08JA	DSRMC06-08JD	DSRMC0608JAN	DSRMC0608JDN
		DSRMC06-16JA	DSRMC06-16JD	DSRMC0616JAN	DSRMC0616JDN
A	150-174 MHz	DSRMC06-08AA	DSRMC06-08AD	DSRMC0608AAN	DSRMC0608ADN
		DSRMC06-16AA	DSRMC06-16AD	DSRMC0616AAN	DSRMC0616ADN
K	217-222 MHz	DSRMC06-08KA	DSRMC06-08KD	DSRMC0608KAN	DSRMC0608KDN
		DSRMC06-16KA	DSRMC06-16KD	DSRMC0616KAN	DSRMC0616KDN
B	380-420 MHz 450-470 MHz	DSRMC06-08BA	DSRMC06-08BD	DSRMC0608BAN	DSRMC0608BDN
	470-512 MHz	DSRMC06-16BA	DSRMC06-16BD	DSRMC0616BAN	DSRMC0616BDN
C	796-824 MHz	DSRMC06-08CA	DSRMC06-08CD	DSRMC0608CAN	DSRMC0608CDN
	896-901 MHz	DSRMC06-16CA	DSRMC06-16CD	DSRMC0616CAN	DSRMC0616CDN

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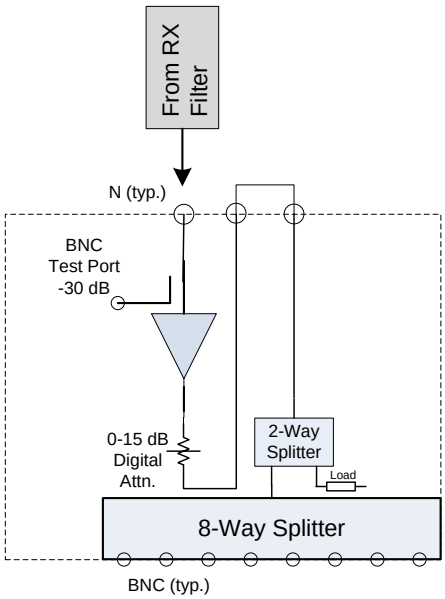
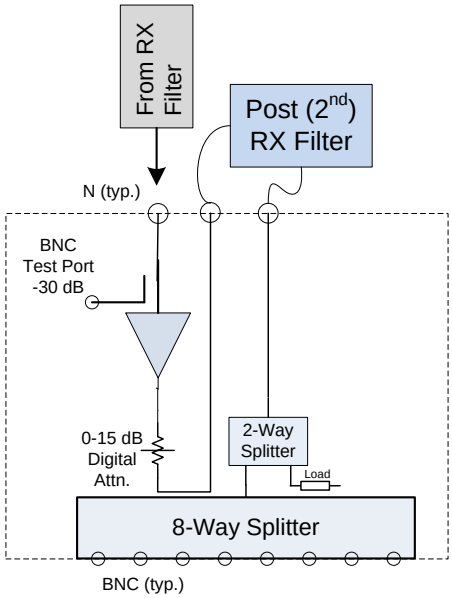
Application, showing Provisions for post-filter



Normal Single Pre-Filter Configuration



Post-Filter Configuration for Additional Selectivity

A typical configuration will use an external pre-filter, normally a passband Window Filter.

The block diagrams illustrate how additional filtering can be added after the amplifier if needed to provide additional protection to your receiver. Because it is placed after the LNA, the additional loss of the post filter has minimum impact to the sensitivity of your receiver.

Available Accessory for Installation in the Field

DSRMC06-EXP	**8-Channel Expansion Kit (Includes splitter and cable assembly)**