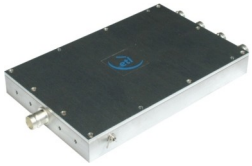
COM04L1A-2270

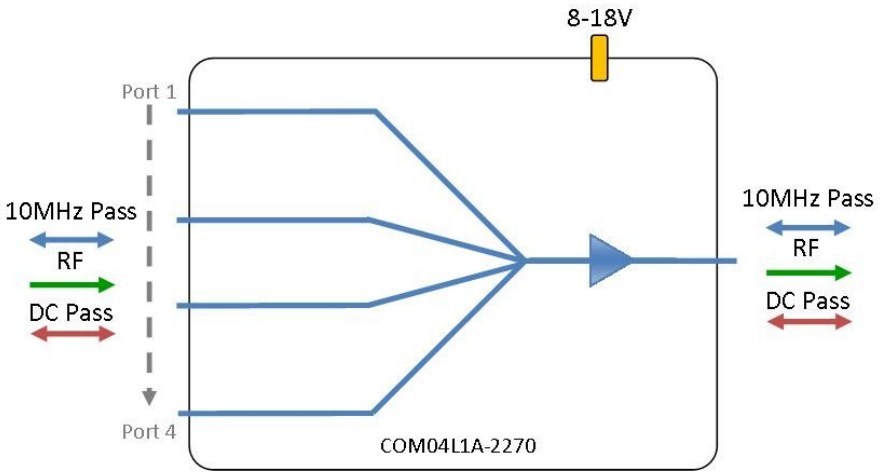
RF Engineering & Custom Build

4-way L-band active combiner



COM04L1A-2270 is a 4-way L-Band active combiner with unity gain and DC & 10MHz pass between the common port and all output ports. This component is available with the following RF connector options: 50 Ω SMA, N-type, BNC and 75 Ω BNC or F-type.

Vector diagram



RF Parameters

COM04L1A-2270-xxxx	S5S5	N5N5	B5B5	B7B7	F7F7
Frequency Range	850-2150 MHz	850-2150 MHz	850-2150 MHz	850-2150 MHz	850-2150 MHz
RF Connectors	50Ω SMA	50Ω N-Type	50Ω BNC	75Ω BNC	75Ω F-Type
Gain	0 ±0.80 dB	0 ±0.80 dB	0 ±0.8 dB	0 ±1.4 dB	0 ±1.4 dB
Input Return Loss	22 dB typ	22 dB typ	18 dB typ	15 dB typ	12 dB typ
	14 dB min	14 dB min	12 dB min	8 dB min	8 dB min
Output Return Loss	20 dB typ	20 dB typ	18 dB typ	15 dB typ	15 dB typ
	12 dB min	12 dB min	12 dB min	8 dB min	8 dB min
1 dB GCP*	5 dBm typ	5 dBm typ	5 dBm typ	5 dBm typ	5 dBm typ
	0 dBm min	0 dBm min	0 dBm min	0 dBm min	0 dBm min
IP3	15	15	15	15	15
Noise Figure	17	17	17	17	17

1dB Gain Compression Point (1dB GCP) is in relation to output power.
Isolation: Isolation between any 2 output ports is typically 16dB .
Isolation: Isolation (reverse gain) between the common port and any of the output ports is typically 35dB.
10MHz Insertion loss is 8 ± 1 dB

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4-way L-band active combiner

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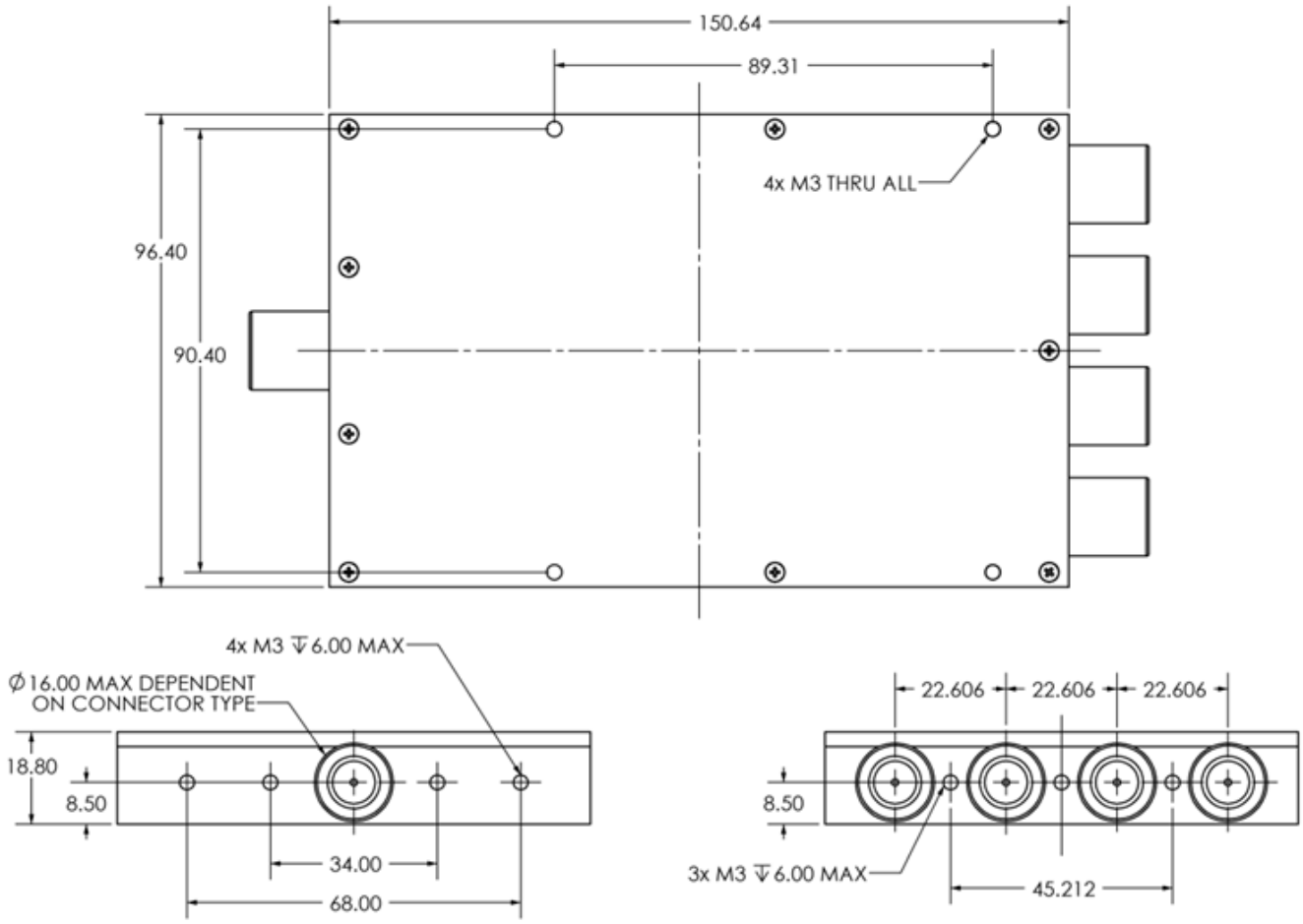
Environmental	
Operating Temperature	0˚C to 45˚C
Storage Temperature	-20˚C to +75˚C
Location	Indoor use Only
Humidity	85% non-condensing
Altitude	10,000 feet

Max Operating Parameters	
Input RF Power	+21 dBm (125mW)
DC Voltage	35V on any RF port
DC Current	500mA
DC Consumption	100mA Max, 80mA typical

! Operation beyond these limits may cause instantaneous and permanent damage.

Physical dimensions



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COM04L1A-2270

4-way L-band active combiner

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Feature set for alternative 4-way Active L-band combiners

Model Number	Frequency (MHZ)	Gain/Frequency re-sponse	10MHz/DC functionality
COM04L1A-2204	850 - 2150	Unity gain	All RF ports are DC blocked
COM04L1A-2222	850 - 2150	8dB Gain / Flat response	All RF ports are DC blocked
COM04L1A-2228	850 - 2150	3dB Gain / 6dB +ve slope	All RF ports are DC blocked
COM04L1A-2230	850 - 2150	Unity gain	All RF ports are DC blocked
COM04L1A-2252	850 - 2150	Unity gain / Flat response	Port 1 to common port 10MHz & DC pass All other ports are 10 MHz & DC blocked
COM04L1A-2255	850 - 2150	Unity gain	Port 1 to common port 10MHz & DC pass All other ports are 10 MHz & DC blocked
COM04B2A-2106	50 - 2150		All RF ports are 10 MHz pass & DC blocked
COM04L1A-2270	850 - 2150	Unity gain	All RF ports are 10 MHz & DC pass

** Custom designs available on request*

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