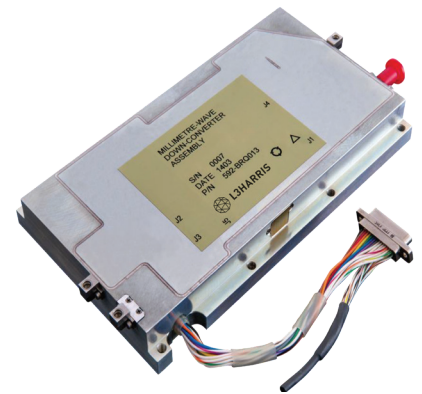


MDA (MILLIMETRE-WAVE DOWNCONVERTER ASSEMBLY)

18-40 GHz downconverter for extended coverage

TECHNICAL SPECIFICATIONS

Input Frequency Range	18-40 GHz	
Sub-bands:		
Band A:	Input	18-26 GHz
	Output	7-15 GHz
Band B:	Input	26-40 GHz
	Output	4-18 GHz
Out-of-band Rejection	50 dBc	
Transmission Gain (J1 to J2)	27.75 ±3.75 dB	
In-band Ripple	±2 dB	
Input P1 dB:	18-21 GHz	-19 dBm
	21-26 GHz	-18 dBm
	26-30 GHz	-21.5 dBm
	30-37 GHz	-20 dBm
	37-40 GHz	-18.5 dBm
Noise Figure:	18-21 GHz	6.5 dB
	21-24 GHz	6.6 dB
	24-26 GHz	7.4 dB
	26-30 GHz	7.6 dB
	30-35 GHz	9.0 dB
	35-40 GHz	9.8 dB
Reference Input Frequency	100 MHz or 1 GHz (define)	
Reference Power	0 to +6 dBm, 100 MHz version -17 to 11 dBm, 1 GHz version	
BITE Path Gain (J4 to J2)	2-16 dB	
Internal BITE Output Freq	11 GHz	
Power Supply:	+12 V ±5%	780 mA
	+8 V ±5%	2000 mA
	+5 V ±5%	850 mA
	-12 V ±5%	300 mA
Control Signals	TTL levels	
Digital Attenuator Control	4 bit, 15 dB maximum range	
Operating & Storage Temp	-54°C to +85°C base plate	
Humidity	95% condensing	
Vibration	17.5 g RMS 10-2000 Hz random	
Shock	30 g, 11 milliseconds, half-sine pulse	
Weight	1 kg maximum	



KEY FEATURES

- > 18-40 GHz coverage in two bands
- > Modular construction with high level of integration in each sub-assembly
- > Amplifiers, downconverter, switched filters, LO sub-system and BITE in a single, compact package
- > State-of-the-art technology

APPLICATIONS

- > Electronic warfare receivers
- > Block downconverters

OPTIONS

- > With SMA connectors
- > With GPO connectors

The MDA is capable of processing pulsed and CW microwave signals in the 18-40 GHz range to provide a common output for later processing. The MDA's primary function is to amplify signals in this frequency range and convert them to a 4-18 GHz baseband output.

Built In Test (BITE) function is available to provide a go / no-go output result. This makes it ideal for use as a frequency coverage extender for existing systems.

All required high frequency local oscillator tones are generated internally from an external 1 GHz (100 MHz option) reference signal. Frequency multipliers for LO tone generation means that the phase noise tracks that of the external reference.

MDA (Millimetre-wave Downconverter Assembly)

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L3Harris reserves the right to amend specifications in the light of continuing development.

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