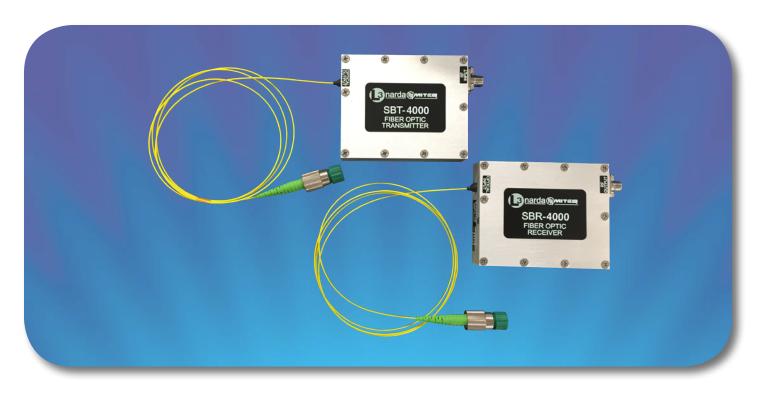
SBL-4000 FIBER OPTIC LINK





FEATURES

- High spur free dynamic range of 110 dB/Hz^{2/3} typical
- · Operates with tens of kilometers of single mode fiber
- · Small size, self contained, plug and play
- · LED status light
- Industry standard connector for DC power and remote status reporting

L3 Narda-MITEQ's new SBL series of fiber optic link components continue the company's tradition of supplying high performance, "plug & play" fiber optic link components for linear and some digital applications. The SBT-4000 fiber optic transmitter and the SBR-4000 fiber optic receiver can transport RF signals within the frequency range of 10 MHz to 4 GHz, over tens of kilometers of standard single mode optical fiber. The SBL fiber optic link components are fully self-contained, requiring no external circuits to operate. Both the transmitter and receiver components have status reporting connections, making them ideal for integration into higher-level assemblies and SATCOM systems. Some common applications are: Satcom and RF antenna remoting, optical delay lines, inter-facility RF links and electrically isolated RF links.



SBL-4000 FIBER OPTIC LINK

SPECIFICATIONS

ELECTRICAL SPECIFICATIONS a	at 23 °C				<u> </u>		
PARAMETER	CONDITION	UNITS	MIN	TYP.	MAX.		
Operating frequency		10 MHz to 4 GHz					
Gain dB]	dB	10	13	18		
Gain flatness		dB			±2		
Noise figure		dB		10	18		
Group delay	Peak to peak	ns		0.1	0.2		
Return loss	Tx input/Rx output	dB			-9.54		
Phase noise	100 Hz offset	dBc 100					
Input power at 1 dB compression P1 dB		dBm	-14	-11	,		
Spurious-free dynamic range]	dB/Hz ^{2/3}		111	111		
Maximum input power	No damage	dBm +10					
RF connectors	Input/output	SMA/F					
DC and monitor connector	PHR-7, manufactured by J.S.T. Mfg. Co. Ltd.						
Impedance	Input/output	Ohms		50	50		
DC voltage		Vdc		+12	+12		
DC current (Transmitter / Receiver)	1	mA		250 / 150	250 / 150		
Operating temperature	1	°C		-20 to +50	-20 to +50		

NOTES: 1. Specifications are stated with no additional optical fiber between transmitter and receiver.

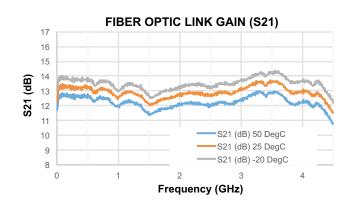
- 2. Test condition at -30 dBm input power, 1 meter of fiber.
- 3. Noise figure and other specifications may be degraded at frequencies below 50 MHz.

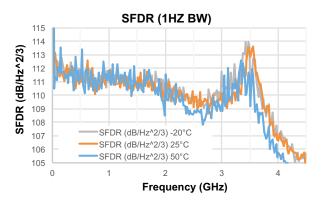
OPTICAL SPECIFICATIONS (at 23 °C)

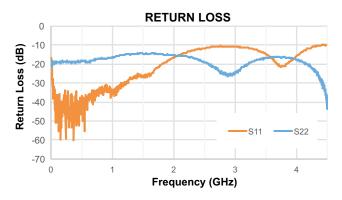
PARAMETER	CONDITION	UNITS	MIN	TYP.	MAX.	
Optical fiber			Single mode fiber, tight buffer (9/125/900)			
Fiber optic connectors			SC/APC			
Fiber pigtail length	For reference	m	1			
Center wavelength		nm	1540	1550	1560	
Spectral width	at -20 dB	nm		0.01	0.1	
Optical power in fiber		mW		4		
Side mode suppression ratio		dB	30 40			
Wavelength temperature coefficient		nm/ °C		0.1	0.12	

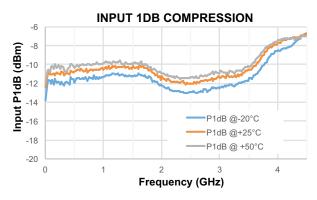


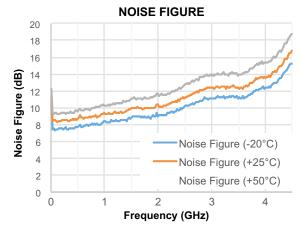
PHASE NOISE SPECIFICATIONS











SBL-4000 FIBER OPTIC LINK

ORDERING INFORMATION

SBT-4000.....Transmitter
SBR-4000.....Receiver

ENVIRONMENTAL SPECIFICATIONS

Temperature

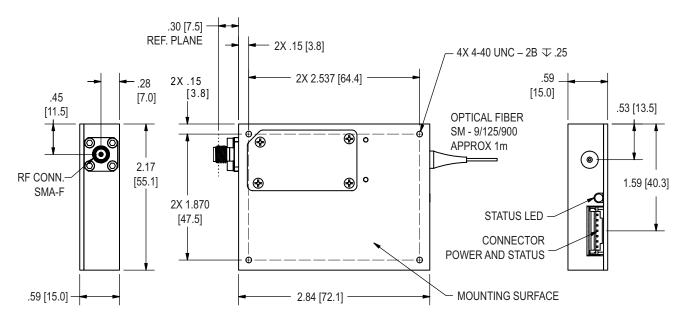
Operating.....-20 °C to +50 °C Storage...-40 °C to +85 °C

Vibration 7.3 g's rms, 20-20000 CPS

Per MIL-STD-8108B, Method 514, Procedure 5

OUTLINE DRAWING

218063



Note: Dimensions shown are in inches and those shown in brackets [] are in millimeters.

The material presented in this datasheet was current at the time of publication. L3 Narda-MITEQ's continuing product improvement program makes it necessary to reserve the right to change our mechanical and electrical specifications without notice. If either of these parameters is critical, please contact the factory to verify that the information is current.

This material consists of L3 Narda-MITEQ general capabilities information and does not contain controlled technical data as defined within the International Traffic in Arms (ITAR) Part 120.10 or Export Administration Regulations (EAR) Part 734.7-11.

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435 Moreland Road

Hauppauge, NY 11788

Tel: 631-231-1700 Fax: 631-231-1711

Email: componentsnm@L3T.com

www.nardamiteq.com