Category
Amp Drop-Ins

1.2GHz 2x4 Motorola Compatible Node Module

Our Star Power Mx1200 is a direct replacement for Motorola series BTN-M, BTN2, SG2000 and SG2440 legacy nodes. It adds forward and return segmentation along with a 1.22GHz forward bandwidth and replaceable diplexers for future return/ forward mid splits. Available in Standard and High Output configurations.

Features

- 1.22GHz bandwidth
- Replaceable diplexers
- Forward segmentable: Right and left (2x), or both (1x)
- Returns are independent and segmentable using zero jumpers (pads) (1x, 2x, 3x or 4x)
- High output design.
- Compatible with legacy amplifiers
- Amp is build using a high quality aluminum die case housing for improved heat dissipation
- Each port can be equalized using JXP Linear EQs (1dB increments)
- Qorvo GaAs or GaN technology for improved specifications
- Up to 5 output ports
- Built-in Power Supply

Part Number Matrix

SP - M [x] [x] - 1220 [x] - TBBS

Split

A = 5-42/54-1218
B = 5-65/85-1218
C = 5-85/102-1218
D = 5-204/258-1218

Compatibility

1 = BTN-M / BTN2
2 = SG2000 / SG2440

Output Level

S = Standard (GaAs)
H = High Output (GaN)

THOMASON BROADBAND SUPPLY

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Specifications

Forward Path	Units	Specifications	
Optical Receiver			
Optical Wavelength	nm	1260 to 1620	
Optical Input Power Range	dBm	-6.0 to 1.0	
Optical Connector Type		SC/APC	
Optical Test Point	Volt/mV	1+- .1%	
Launch Amp			
RF Operational Bandwidth Forward	MHz	54/105 to 1218	
Flatness (in respect of tilt)	dB	+/- 1.0	
Internal Linear Tilt	dB	4.0	
Test Points (+/-1.0dB)	dB	-20	
Amplifier Technology (output hybrids)		Standard = GaAs / High Output = GaN	
Hybrid Gain Block Manufactuer		Qorvo	
Operational Gain (from FWD All input to Port outputs w/0pads)	dB	Standard = 35 / High Output = 35	
Return Loss	dB	16	
Analog Distortions			
Reference Level (Vo) Standard (18dB Linear Tilt)	dBmV	39/57 @ 54/1218MHz (Virtual Output)	
Reference Level (Vo) High Output (22dB Linear Tilt)	dBmV	39/61@ 54/1218MHz (Virtual Output)	
		Standard (GaAs)	High Output (GaN)
Hum Modulation	dB	71	71
CTB	dB	70	71
CSO	dB	62	64
Carrier to Noise	dB	52	51

Return Path	Units	Specifications
Operational Bandwidth Reverse	MHz	5-42, 5-65, 5-85, 5-204
Flatness	dB	+/- 1.0
Output Linear Tilt	dB	0 +/- 1.0
Port Impedance	ohms	75
Return Loss	dB	16
Gain (from any Port to RTN all port w/0pads)	dB	5

Electrical/Mechanical	Units	Specifications	
Max. AC Through Current (continuous)	Amp	15	
Max. AC Through Current (surge)	Amp	25	
Component DC Power Consumption (typical)		**24vdc**	**5vdc**
- Launch Amplifier (BTN-M, BTN-2) Std	Amp	1.890	0.5
- Launch Amplifier (BTN-M, BTN-2) HiOpt	Amp	2.02	0.5
- Launch Amplifier (SG200/2440) Std	Amp	2.34	0.5
- Launch Amplifier (SG2000/2440) HiOpt	Amp	2.74	0.5
- Optical Receiver	Amp	.480	0.5
- Optical Transmitter	Amp	.240	0.5
Power Supply DC Current Rating (Max)	Amp	4	1
Dimensions (Launch Amp)	inches / mm	16x6.75x3.75 / 406x171x95	
Weight (Launch Amp)	lbs / kg	6.6 / 2.99	

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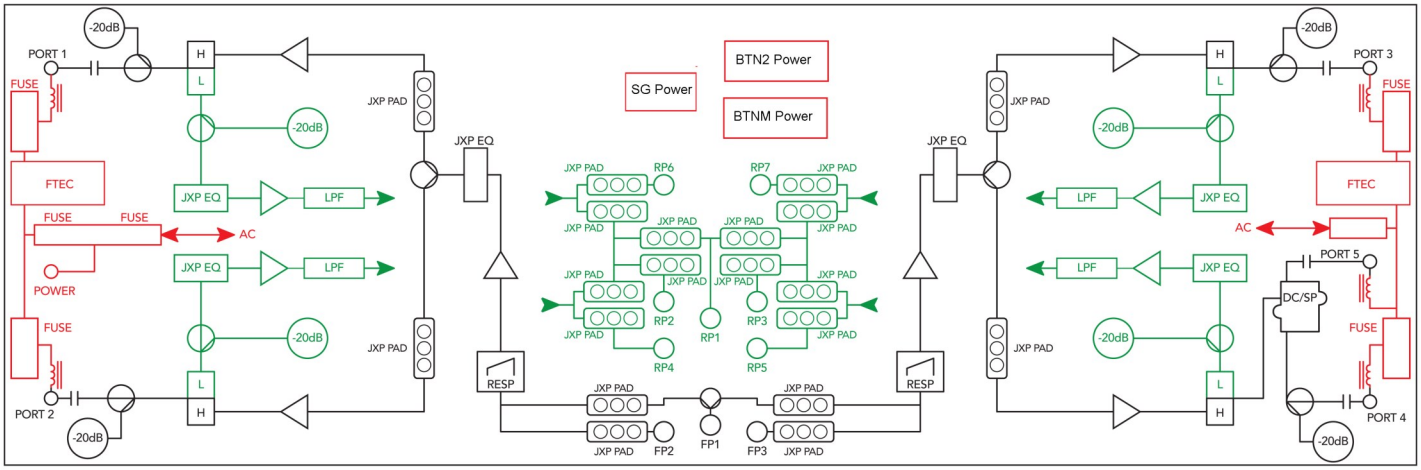
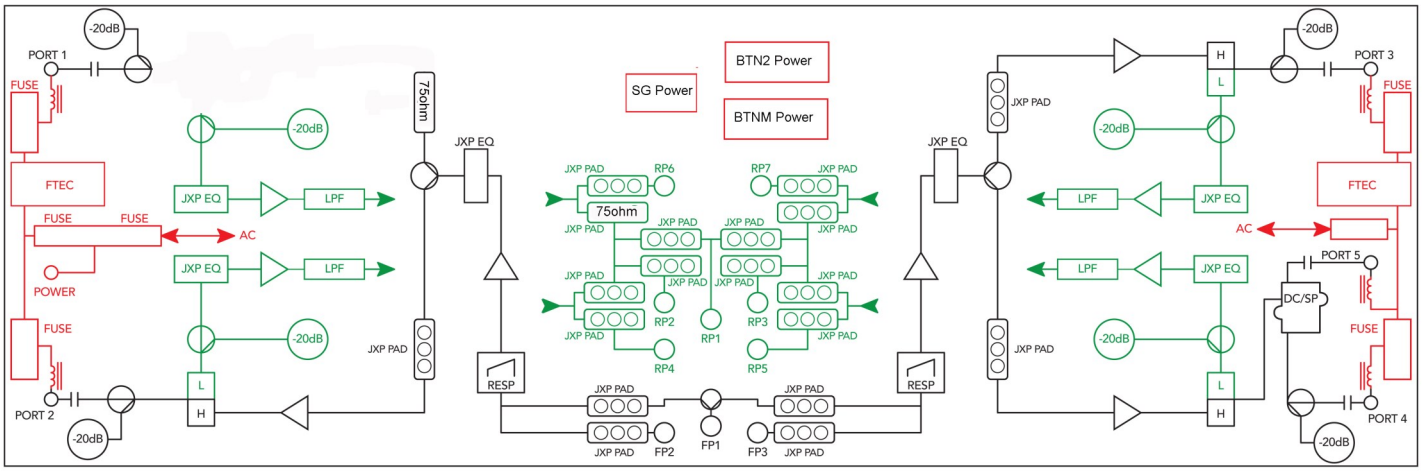
Board Layouts



SG2000 and SG2440 Layout



BTN-M and BTN-2 Layout