



MODULATOR BIAS CONTROLLER - SINGLE SIDEBAND

PRELIMINARY

Features

- For DPMZ modulator SSB applications
- Two operation modes: calibration mode and locking mode
- Three modulators can be controlled by one controller
- User adjustable pilot tone amplitude
- Locking points around null, quad can be fine-tuned
- Calibration off mode for quick system setup in locking mode
- One PD is integrated
- USB interface
- GUI is included, user can stop pilot tone in manual mode
- For single sideband application
- RS232 interface provided
- Low profile (2.53" x 2.57" x 0.65")
- Access for external photo-detector

Product Description

The SSB (Single Sideband) Modulator Bias Controller is designed to be used with DPMZ modulators for single sideband applications.



MBC-SSB

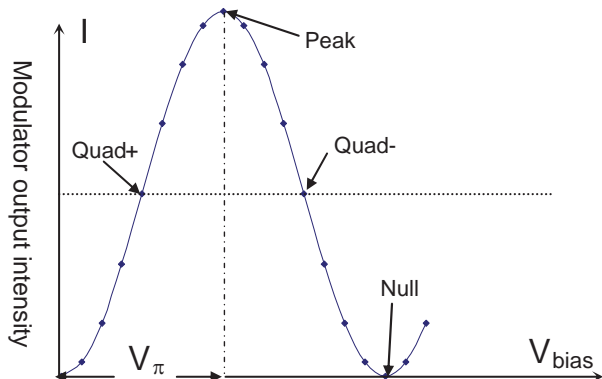


Figure 1. MZ modulator working function

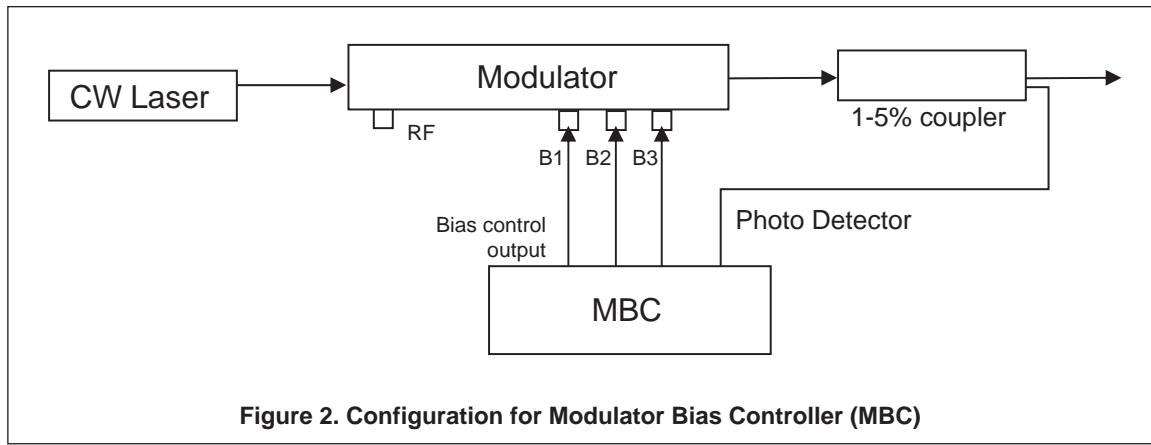


Figure 2. Configuration for Modulator Bias Controller (MBC)

Specifications

Parameters	Min.	Typ.	Max.
Optical Performance			
Detector Input Power ¹ (dBm)	-25		-10
Optical Wavelength (nm)	1000–1650		
Electrical Performance			
Bias Voltage (V)	-12		12
Null Mode Extinction Ratio ² (dB)		25	40
Locking Slope	Positive or Negative		
Locking Mode	Two Null (Peak) positions, one Quad+ or (Quad-) position		
Pilot Tone			
Modulation Depth (NULL) (%)	Adjustable		
Pilot Tone Frequency (QUAD) (Hz)		500, 1000	

Parameters	Min.	Typ.	Max.
Power Supplies			
DC Positive Power Voltage (V)	14.5	15	15.5
DC Negative Power Voltage (V)	-15.5	-15	-14.5
DC Positive Power Current (mA)		145	
DC Negative Power Current (mA)		80	
General			
Operating Temperature (°C)	0–70		
Storage Temperature (°C)	-40–85		
Dimension (inch)	2.53 x 2.57 x 0.65		
Weight (lb)	0.2		

¹ For a given input, detection power refers to the coupled optical power to the photodiode of DPMZi-MBC when the modulator output is at its minimum attenuation (The detection power does not describe the detected power at locking status).

² In this case, the modulator output power was greater than 0 dBm. 1% coupler was used. The extinction ratio will be close to but not exceed the extinction ratio of the modulator.

Part Number

MBC-SSB-PP-X

PP = Pigtailed Photodiode code:
 PD = Pigtailed photodiode included
 00 = Pigtailed photodiode not included
 Leave connector code blank

X = Connector code:
 3U = FC/UPC
 3A = FC/APC
 SCU = SC/UPC
 SCA = SC/APC
 LCU = LC/UPC
 LCA = LC/APC