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SMALL FORM MODULATOR BIAS CONTROLLER (FOR PULSE MODE APPLICATIONS)

PRELIMINARY

Features

- User selectable locking slope (QUAD+ ↔ QUAD-, NULL ↔ PEAK)
- User selectable locking mode (Quad+/Quad- ↔ Null/Peak)
- Two operation modes: calibration mode and locking mode
- Calibration off mode for quick system setup in locking mode
- Small size (2.53" x 2.57")
- Access for external photo-detector

Product Description

The small form Modulator Bias Controller is a full-function miniature OEM version of the Modulator Bias Controller (MBC) family. It is designed to be used for pulse mode applications. The Modulator Bias Controller can be used to lock the working point of the modulator at the positive slope quadrature (quad+), negative slope quadrature (quad-), null or peak points of its characteristic curve. The locking modes and slopes are selectable by changing the jumper positions on the PCB. A pigtailed photo-detector is included. An external photo-detector may also be used.

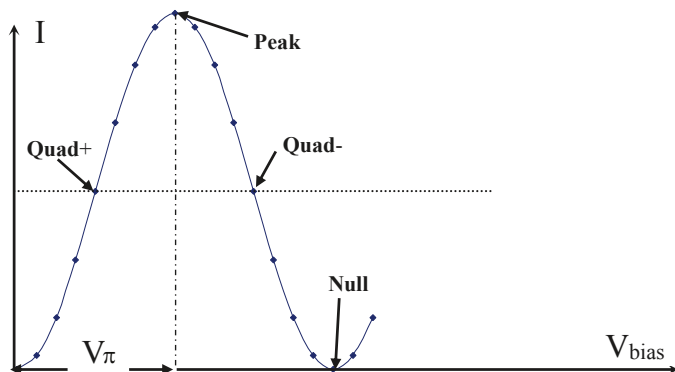


Figure 1.

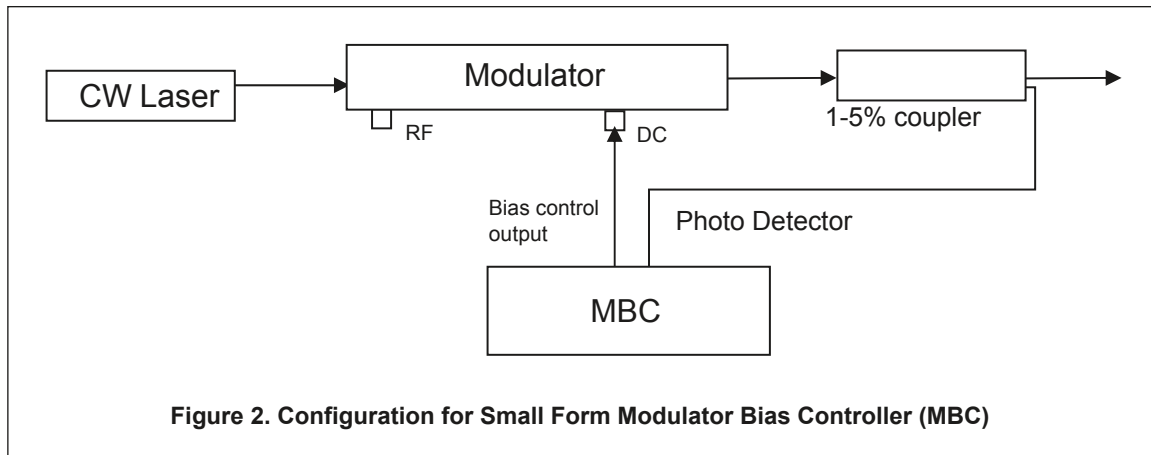


Figure 2. Configuration for Small Form Modulator Bias Controller (MBC)

Specification Table

Parameters	Min	Typ	Max
Part Number	MBC-SF		
Optical Performance			
Detector Input Power ¹ (dBm)	-25		-10
Optical Wavelength (nm)	1000–1650		
Electrical Performance			
Bias Voltage (single ended) (V)	-12		12
Null Mode Extinction Ratio ² (dB)		36	40
Locking Slope	Positive or Negative		
Locking Mode	Null, Peak, +Quad, -Quad		
Pilot Tone			
Modulation Depth ¹ (Null) %	Adjustable		
Pilot Tone Amplitude ¹ (mV) Vpp	0–250		
Pilot Tone Frequency (kHz)	1, 5, 10, 40		
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)	0–40		
Storage Temperature (°C)	-40–85		
Dimension (inch)	2.53 x 2.57		
Weight (lb)	0.2		

¹ Modulation Depth (Null) and Pilot Tone Amplitude are manually adjustable.