

Low Drive Voltage 40Gbps LiNbO₃ External Modulator

General Description

- 40Gbps Mach-Zehnder modulator using Ti diffused LiNbO₃ waveguide technology
- Low drive voltage:
 - Max. 1.8V at 43 Gbps in dual drive [FTM7937EZ]
 - Max. 3.5V at 43 Gbps in single drive (0 chirp) [FTM7938EZ]
- The DC bias is adjusted at the separate DC port of the modulator.
- Built-in a monitor PD for auto bias control
- Applications:
 - 40Gbps optical transmission equipment (NRZ, DPSK, Optical Duo-binary)
 - DWDM optical transmission equipment
 - Measurement equipment for high speed telecommunications

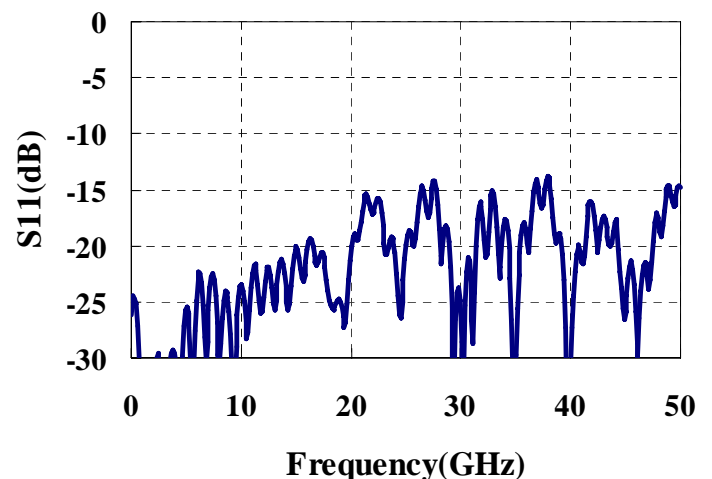
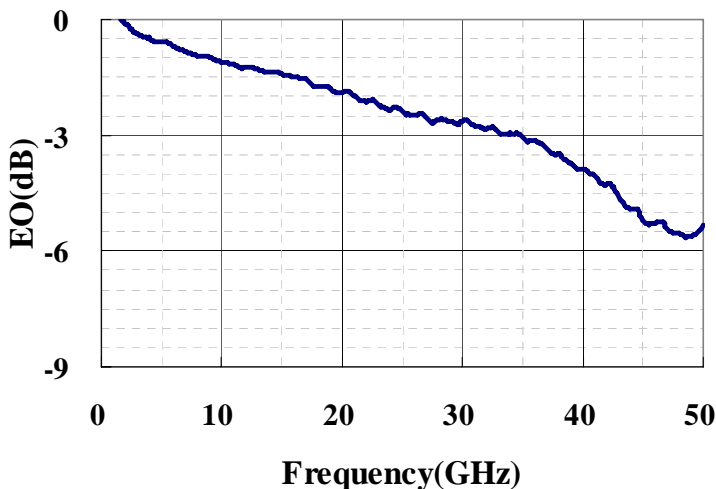


Specifications

Part Number	FTM7937EZ	FTM7938EZ	FTM7938EE
Code	NRZ/ODB/DPSK	NRZ/ODB/DPSK	ODB
Optical Bandwidth (-3dB)	≥ 25 GHz	≥ 25 GHz	≥ 20 GHz
Operating Wavelength	1530 to 1610 nm	1530 to 1610 nm	1530 to 1610 nm
Driving Voltage (V_{π}) @40Gbps	≤ 1.8 V (*1), ≤ 3.5 V (*2)	≤ 3.5 V (*2)	≤ 3.5 V (*2)
Extinction Ratio at Low Frequency	≥ 20 dB	≥ 20 dB	≥ 20 dB
Insertion Loss	≤ 10 dB	≤ 8 dB	≤ 7.5 dB
α Parameter (Typ.)	0 (*1), +/-1.0 (*2)	0 (*2)	0 (*2)
RF impedance (Typ.)	50 ohm	50 ohm	50 ohm
Monitor PD Responsivity	≥ 0.001 A/W	≥ 0.001 A/W	≥ 0.001 A/W
Operating Case Temperature	-5 to 75 °C	-5 to 75 °C	-5 to 75 °C
Package Size (L x W x H)	89.8 x 13.2 x 9.5 mm 3.54 x 0.52 x 0.37 inches	89.8 x 13.2 x 9.5 mm 3.54 x 0.52 x 0.37 inches	89.8 x 13.2 x 9.5 mm 3.54 x 0.52 x 0.37 inches

*1: at dual drive *2: at single drive

Optical Response



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