MITSUBISHI ELECTRIC

Product Brief

Preliminary

MITSUBISHI OPTICAL DEVICES

MF-10KSXA Series
MF-10KWXB Series

10Gb/s, XFP Transceiver with DDM function for Telecommunication

DESCRIPTION

MF-10KSXA Series are compliant with XFP MSA, and designed to provide high optical performance for SDH I-64.1 / SONET SR-1 (2km) and IEEE 802.3ae LR (10km), S-64.2b (40km), and G.951.1 P1L1-2D2 (80km). Transmitter side uses 1310nm DFB for 10km, and 1550nm EM Laser for 40km and 80km with specified driving circuit and signal conditioning circuit. Receiver side uses PD or APD preamp-module and integrated circuits for re-shaping, re-timing and re-generating input optical signal.

MF-10KWXB Series is the first extended XFP (Double width) which designed to provide high optical performance for DWDM applications. Transmitter side uses C-Band DFB Laser with Electrical-Absorption modulator with specified driving circuit and signal conditioning circuit. The receiver detects the optical data input via APD+TIA. The 40km and 80km are also available in XFP-E model.

The both transmitter and receiver perform 3R regeneration via a CDR through the 30-position pluggable edge connector. Input and output signals handle NRZ format.

FEATURES

- Protocol Independent 10Gbps transceiver
- Hot pluggable
- Management interface compliant with I2C™ rev. 2 and XFP MSA
- Multi rate from 9.95Gbps to 10.7 Gbps (FEC), and target 11.09 Gbps
- XFI compatible electrical interface thru 30pin connector

APPLICATIONS

- Metro access
- Metro core
- Wide Area Networks

ORDERING INFORMATION

➢ **Standard XFP model (XFP)**

Type number	Function	Distance
MF-10KSXA-004ZA	I-64 / LR	2/10km
MF-10KSXA-005ZA	S-64.2b/ER	40km
MF-10KSXA-006ZA	P1L1-2D2	80km

➢ **Extended XFP model (XFP-E)**

Type number	Function	Distance
MF-10KWXB-002ZA***	DWDM	80km

code	Freq f(THz)	Center λ(nm)	code	Freq f(THz)	Center λ(nm)	code	Freq f(THz)	Center λ(nm)
5	196.2	1528	37	194.6	1541	69	193	1553
7	196.1	1529	39	194.5	1541	71	192.9	1554
9	196	1530	41	194.4	1542	73	192.8	1555
11	195.9	1530	43	194.3	1543	75	192.7	1556
13	195.8	1531	45	194.2	1544	77	192.6	1557
15	195.7	1532	47	194.1	1545	79	192.5	1557
17	195.6	1533	49	194	1545	81	192.4	1558
19	195.5	1533	51	193.9	1546	83	192.3	1559
21	195.4	1534	53	193.8	1547	85	192.2	1560
23	195.3	1535	55	193.7	1548	87	192.1	1561
25	195.2	1536	57	193.6	1549	89	192	1561
27	195.1	1537	59	193.5	1549	91	191.9	1562
29	195	1537	61	193.4	1550	93	191.8	1563
31	194.9	1538	63	193.3	1551	95	191.7	1564
33	194.8	1539	65	193.2	1552	97	191.6	1565
35	194.7	1540	67	193.1	1553	99	191.5	1565

Example : If you choose Wavelength code **005**, MITSUBISHI Part

Caluculation:

[Frequency:THz]=-0.05*[Wavelength code]+196.45

[Wavelength:nm]=c/f=299792.458/(196.45-0.05*[Wavelength