



OPTTEL
OPTOELETTRONICA
TELECOMUNICAZIONI

OTX - 2262
OTX - 2265

300-2200 MHZ ANALOG WIDEBAND FIBEROPTIC TRANSMITTERS

FEATURES

- 0.3-2.2 GHz bandwidth
- 1310 and 1550 nm wavelength
- DFB Optoisolated with TEC Laser CLASS 1
- Very low noise (RIN < -155 dB/Hz)
- Very low distortion (IP3 > +33dBm; IP2 > +44 dBm)
- High output optical power (> +6dBm @I>30mA)
- RF input power detector and monitoring
- 15 dB, 1 dB step, 4 bit RF step attenuator
- Built-in Micro for Remote Control & Monitoring
- Built-in FSK DC-19.2 Kbps Data Modulator
- Compact shielded BOX (140x92x24 mm)
- Optional EUROCARD front panel for rack mount
- MTBF > 1 Million hours at Ta = 40 °C
- -20 to +60 °C operating Temp. range
- From 20 to 72 V DC direct supply voltage
- Very low power consumption
- Compliancy with the normative EN 61000 6-3;
EN 61000 6-4; EN 60825-1



APPLICATIONS

- VHF, UHF, RF transmission systems
- 450 MHz, 900 MHz 1200 MHz, 1800 MHz, 2100 MHz CELLULAR RADIO Remotization Systems

PRODUCT DESCRIPTION

The OTX-226x series are the BOX (EUROCARD optional front panel for rack mounting) package versions of Analog Fiberoptic LASER Transmitters, designed and developed by OPTTEL, to be used with the ORX-226x series Receivers.

The units provide OEMs an excellent solution to link on a singlemode fiber two RF communication stations, for any kind of signal operating in the frequency spectrum range of 0.3 to 2.2 GHz.

The very high performance of the units is very attractive for CELLULAR RADIO Fiberoptic remotization systems.

MAIN PRODUCT VERSIONS

The OTX-226x family includes the following versions:

Model	Wavelength (nm)
OTX-2262-B	1310
OTX-2265-B	1550

OTX-226x SERIES TECHNICAL SPECIFICATIONS (typ)

OPTICAL SPECIFICATIONS

	OTX-2262	OTX-2265
OPERATING WAVELENGTH (nm)	1310	1550
LASER DIODE	DFB (optoisolated with Thermo-Electric-Cooler)	
OPTICAL ISOLATION (dB)	30	
OUTPUT POWER (dBm)	> +6 with I _{bias} > 30 mA	
PWR STAB. IN TEMP. RANGE (dB)	0.5	
OPTICAL CONNECTOR (Opt)	FC-APC (SC-APC)	
CONNECTOR RETURN LOSS (dB)	>60	
RIN (dB/Hz)	<-155	

RF SPECIFICATIONS

MODULATION BANDWIDTH (GHZ)	0.3 - 2.2
FREQ. RESP. FLATNESS (dB)	+/- 1.5 (Linked with ORX-226x)
CONNECTOR	SMA / 50 Ohm
GAIN (Step Att = 0 dB) (dB)	0
RETURN LOSS (dB)	> 12
Input IP3 / IP2 (dBm)	> +33 / 44
STEP RF ATTENUATOR	0 - 15 dB (1 dB step)
RF ATTENUATOR ADJUST	Remote (Micro)

POWER SUPPLY

VOLTAGE (V)	20 - 72
CONSUMPTIONS (W)	< 2 @25 oC; < 5 @ 60 oC

MECHANICS

HOUSING	Shielded Box
STAND-ALONE BOX (Size, mm)	140Lx92x24H
EUROCARD (Size, mm)	100x160x40 (19" 3U Subrack plug-in)

ENVIRONMENTAL

OPERATING TEMPERATURE	-20 to +60 oC
STORAGE TEMPERATURE	-40 to +70 oC

DATA MODULATOR & MICRO INTERFACE

MODULATION TYPE	FSK
DATA RATE (KBAUD)	DC - 19.2
DATA FORMAT	Asynchronous NRZ
DATA INTERFACE	MICRO 0-5 V
CONNECTOR	Subminiature DB-9

ALARMS

LOCAL ALARMS	(APOT+TEC) LASER out of P & T track (APS) No power supply
FRONT PANEL LEDs	(APOT+TEC) RED-ON when alarm (APS) GREEN-OFF when no power
REMOTE ALARM	MICRO

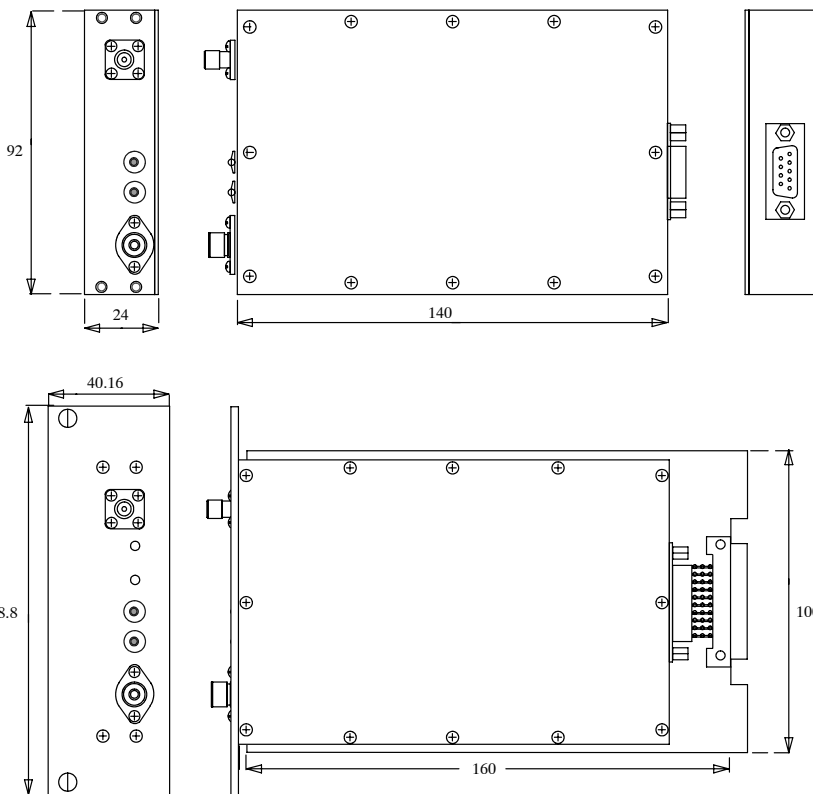
MONITORING

RF INPUT AVERAGE POWER	law as TAB given
LASER OPTICAL POWER OUT	1000 mV = Nominal (+/- 5%)
LASER BIAS CURRENT	10 mV = 1 mA (+/- 5%)

REMOTE CONTROL & MONITORING

TYPE	MICRO on-board
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MECHANICAL DRAWING AND INTERFACES



DB-9 PIN ASSIGNMENT (without / with MICRO)

PIN 1	(20-72) +
PIN 2	RS 232 / Micro 2
PIN 3	(20-72) -
PIN 4	RF Monitoring / Micro 4
PIN 5	Opt. power Monitoring / Micro 5
PIN 6	LASER Bias Monitoring / Micro 6
PIN 7	GND
PIN 8	Dry contact n. 1 / Micro 8
PIN 9	Dry contact n. 2 / Micro 9

(*) - Without the MICRO on-board the data interface is RS 232 and the remote alarm are given by dry contacts.

DIN 41612 B/2 PIN ASSIGNMENT

PIN 4	ab	(20-72) +
PIN 13	ab	(20-72) -
PIN 8	ab	Data input RS 232 / Micro 2
PIN 1-3	ab	GND
PIN 5	ab	RF Monitoring / Micro 4
PIN 7	ab	Opt. power Monitoring / Micro 5
PIN 6	ab	LASER Bias Monitoring / Micro 6
PIN 14-16	ab	GND
PIN 11	ab	Dry contact n. 1 / Micro 8
PIN 12	ab	Dry contact n. 2 / Micro 9
PIN 2-15	ab	NC



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