

	Datasheet	No.	DS10-E020
		Initial Date	2017-07-18
OE	OE681	Written Team	R&D Dept. GH Zheng

I Preview

PN	OE681
Description	10G SFP+ Copper 30m

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III Revision History

No.	Date	Items	Change Recording	Ver.	Rev.	Customer
1	2017-07-18	All	Initial registration	000	000	Standard
2						
3						
4						
5						
6						

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1. Features:

- ◆ Hot-pluggable SFP+ footprint
- ◆ Fully metallic enclosure for low EMI
- ◆ Low power dissipation
- ◆ Compact RJ-45 connector assembly
- ◆ Access to physical layer IC via 2-wire serial bus
- ◆ Supports Links up to 30m using Cat 6a/7 Cable
- ◆ RoHS Compliant
- ◆ Operating case temperature: 0°C to 70°C

2. Applications:

- ◆ 10 Gigabit Ethernet over Cat 6a/7 cable

3. Description:

OE681 is Copper Small Form Pluggable (SFP) transceivers are high performance, cost effective module compliant with the 10G Ethernet and 10GBASE-T standards as specified in IEEE 802.3az, which supporting 10Gbps data- rate up to 30 meters reach over unshielded twisted-pair category 6a/7 cables. The module provides standard serial ID information compliant with SFP+ MSA, which can be accessed with address of A0h via the 2wire serial EEPROM protocol. The physical IC can also be accessed via 2wire serial bus at address A0h.

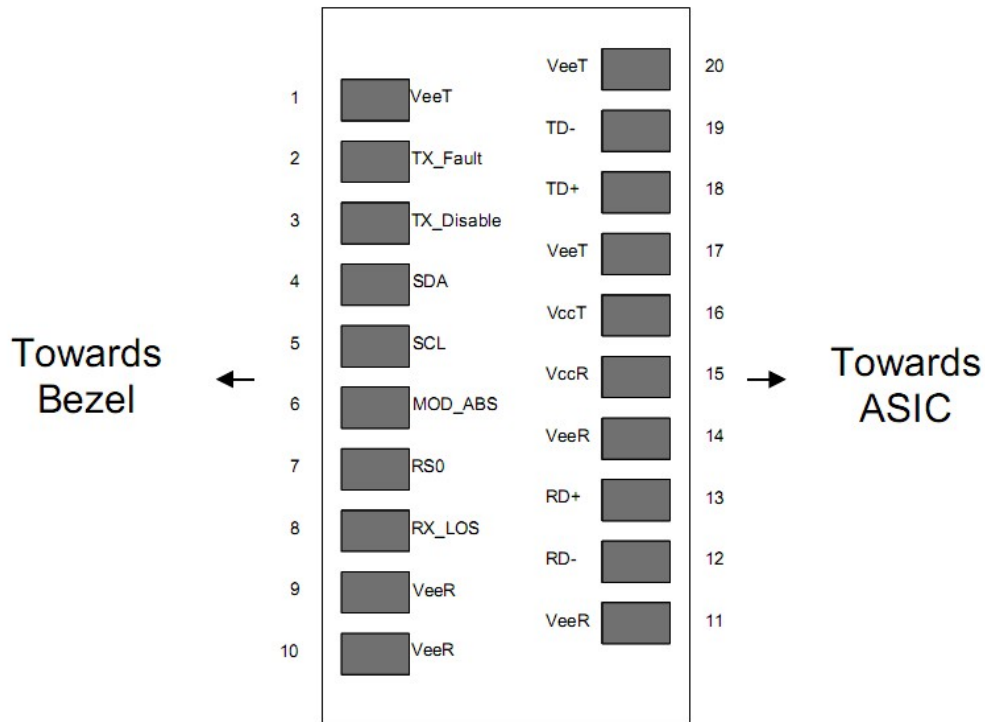
4. Operating Environment

Parameter	Symbol	Min	Typ	Max	Units	Notes/Conditions
Operating Temperature	Top	0		70	°C	Case temperature
Storage Temperature	Tsto	-40		85	°C	

5. Pin Information

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Pin	Signal Name	Description	Plug Seq.	Notes
1	V _{EET}	Transmitter Ground	1	
2	TX FAULT	Transmitter Fault Indication	3	Not supported
3	TXDISABLE	Transmitter Disable	3	
4	SDA	SDA Serial Data Signal	3	
5	SCL	SCL Serial Clock Signal	3	
6	MOD_ABS	Module Absent. Grounded within the module	3	
7	RS0	Not Connected	3	
8	LOS	Loss of Signal	3	
9	V _{EER}	Receiver ground	1	
10	V _{EER}	Receiver ground	1	
11	V _{EER}	Receiver ground	1	
12	RD-	Inv. Received Data Out	3	
13	RD+	Received Data Out	3	
14	V _{EER}	Receiver ground	1	
15	V _{CCR}	Receiver Power Supply	2	
16	V _{CCT}	Transmitter Power Supply	2	
17	V _{EET}	Transmitter Ground	1	
18	TD+	Transmit Data In	3	
19	TD-	Inv. Transmit Data In	3	
20	V _{EET}	Transmitter Ground	1	

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6. Electrical Power Interface

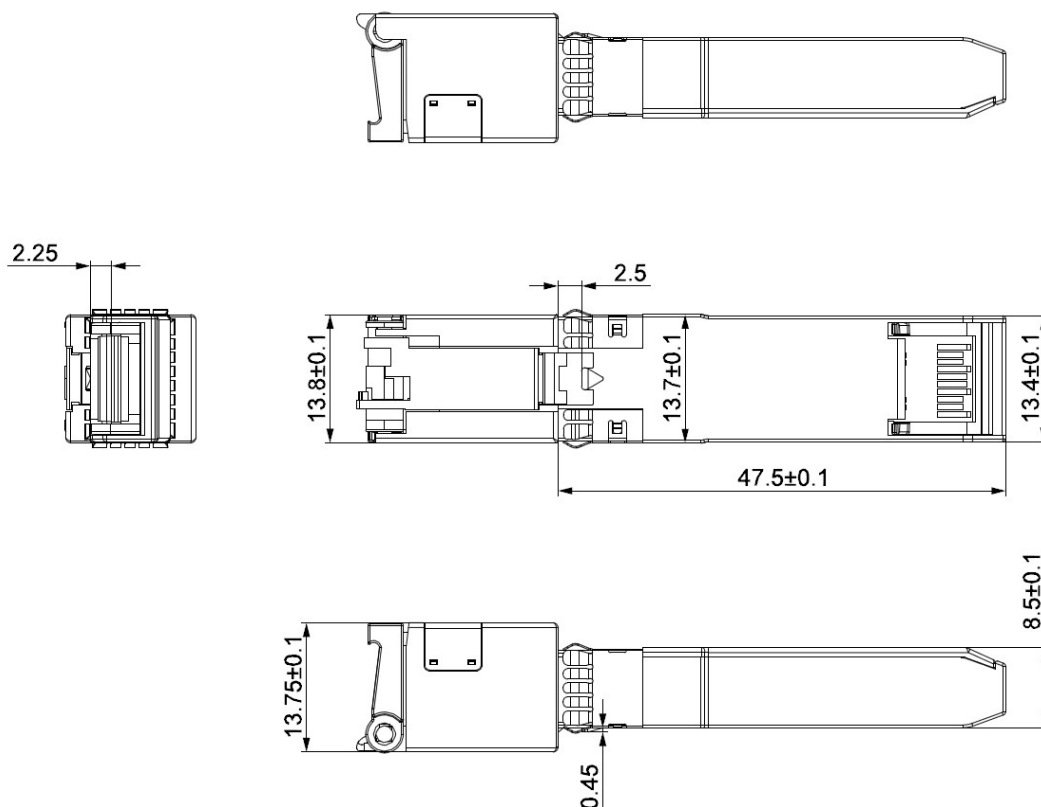
The OE681 has an input voltage range of +3.3V +/- 5%.

Parameter	Symbol	Min	Typ	Max	Units	Notes/Conditions
Supply Current	Is		700	750	mA	2.5W max power over full range of voltage and temperature. See caution note below
Input Voltage	Vcc	3.13	3.3	3.47	V	Referenced to GND
Maximum Voltage	Vmax			4	V	
Surge Current	Isurge			30	mA	Hot plug above steady state current. See caution note below

7. General Specifications

Parameter	Symbol	Min	Typ	Max	Units	Notes/Conditions
Data Rate	BR		10.3		Gb/sec	IEEE 802.3 compatible.
Cable Length	L			30	m	Category 6a/7 UTP. BER <10-12

8. Mechanical Specifications



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9. Model Name Information

PN	Description
OE681	10G SFP+ Copper 30m Tx Disable Rx LOS 0~70°C

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