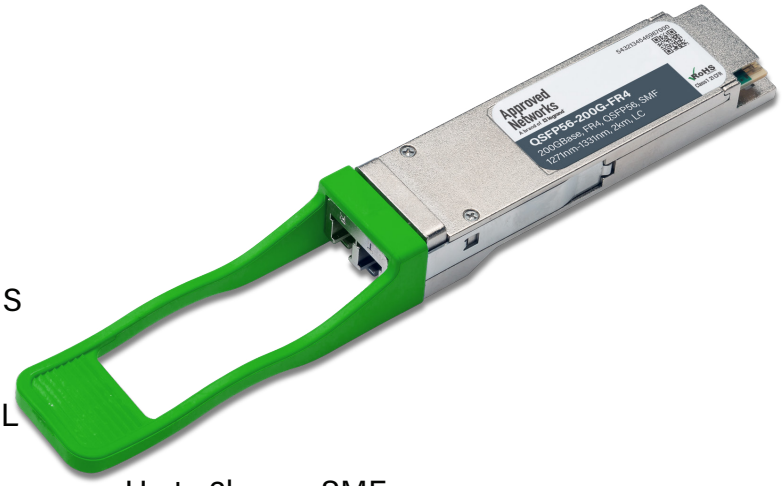
Approved Networks
A brand of legrand

QSFP56-200G-FR4

200GBASE, QSFP56, FR4, SMF TRANSCEIVER
1271nm-1331nm, 2km REACH, DUPLEX LC CONNECTOR

Features:

- Compliant with IEEE Std 802.3cn, 200GBASE-FR4
- Compliant with QSFP56 MSA
- I2C Management interface compliant to CMIS V4.0
- 4 channels uncooled 53.125Gb/s CWDM EML Laser
- 4 channels PIN photo detector
- Single 3.3V power supply
- Class 1 laser safety certified
- Power consumption less than 6.5W
- Commercial operating temperature: 0º to +70º



- Up to 2km on SMF
- RoHS Compliant
- Duplex LC connector

Applications:

- 200GBASE-FR4 Ethernet links
- Data center

1. Absolute Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Storage Temperature	TS	-40	85	ºC
Relative Humidity	RH	15	85	%
Supply Voltage	VCC	-0.5	3.6	V

Stresses in excess of the absolute maximum ratings can cause permanent damage to the device. These are absolute stress ratings only. Functional operation of the device is not implied at these or any other conditions in excess of those given in the operational sections of the data sheet. Exposure to absolute maximum ratings for extended periods can adversely affect device reliability.

2. Recommended Operating Conditions

Parameter	Symbol	Min	Typ	Max	Unit
Operating Case Temperature	TC	0	-	70	ºC
Supply Voltage	VCC	3.13	3.3	3.47	V
Data Rate per Channel	-	53.125±100ppm			GBd

3. Electrical Characteristics

Parameter	Symbol	Minimum	Typical	Maximum	Unit	Notes
Module Supply Current	Icc	-	-	2.07	A	-
Power Dissipation	PD	-	-	6.5	W	-
Transmitter						
Input Differential Impedance	ZIN	90	100	110	Ω	-
Differential Data Input Swing	VIN, P-P	-	-	900	mVP-P	-
DC Common-Mode Input Voltage	-	-350	-	2850	mV	-
Receiver						
Output Differential Impedance	ZO	90	100	110	Ω	-
Differential Data Output Swing	VOUT, P-P	-	-	900	mVP-P	1
Transition Time (20% to 80%)	Tr,Tf	9.5	-	-	ps	-

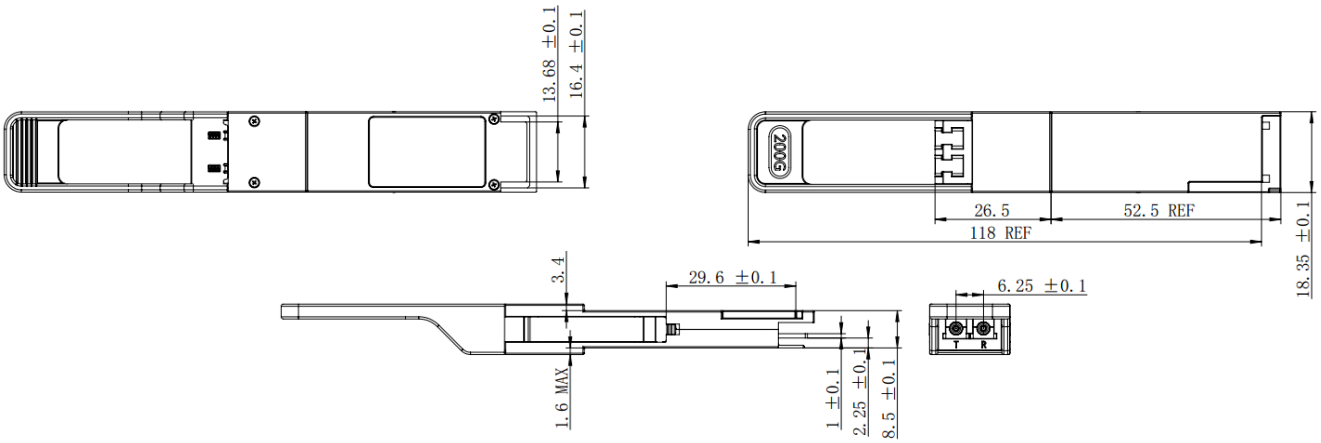
4. Optical Characteristics

Parameter	Symbol	Min	Typical	Max	Unit	Notes
Transmitter						
OMA Optical Power per lane	Po	-1.2	-	4.5	dBm	1
Average Optical Power per lane	Pav	-4.2	-	4.7	dBm	1
Center Wavelength Range	L1	1264.5	-	1277.5	nm	-
	L2	1284.5	-	1297.5	nm	-
	L3	1304.5	-	1317.5	nm	-
	L4	1324.5	-	1337.5	nm	-
Extinction Ratio	ER	3.5	-	-	dB	2
Transmitter and dispersion penalty eye closure for PAM4, each lane	TDECQ	-	-	3.3	dB	2
Spectral width(-20dB)	Δλ	-	-	1	nm	-
Side Mode Suppression Ratio	SMSR	30	-	-	dB	-
Transmitter reflectance	-	-	-	-26	dB	-

Pout @TX-Disable Asserted	Poff	-	-	-30	dBm	1
Receiver						
Center Wavelength	L1	1264.5	-	1277.5	nm	-
	L2	1284.5	-	1297.5	nm	-
	L3	1304.5	-	1317.5	nm	-
	L4	1324.5	-	1337.5	nm	-
OMA sensitivity per Channel	-	-	-	-6.0	dBm	3
Average Optical Power sensitivity per Channel	-	-	-	-9.5	dBm	3
Average Receiver Overload per Channel	POL	4.7	-	-	dBm	3
Receiver reflectance	-	-	-26	dB	-	
LOS De-Assert	LOSD	-	-8	dBm	-	
LOS Assert	LOSA	-30	-	-	dBm	-
LOS Hysteresis	-	0.5	-	-	dB	-

Notes:
1. The optical power is launched into SMF.
2. Measured with a SSPRQ test pattern @53.125Gbps PAM4.
3. Measured with PRBS31Q test pattern, 53.125Gbps, BER<2.4E-4;

5. Mechanical Diagram



Note: External physical characteristics are subject to variation. This may include, but is not limited to, external case designs, pull tab colors and/or shapes, removal latch styles or colors, and label sizes and placement. These variations do not affect the function or characteristics of the transceivers.

6. Ordering Information

OEM	Part Number	OEM	Part Number
Arista	QSFP-200G-FR4-A	MSA	AN-QSFP56-200G-FR4
MSA Champion ONE	200GQSFP56E-FR4		

7. Contact Information

Tel: 800.590.9535
Web: http://www.approvednetworks.com