PCN: V17-005-E47540-MF

Product Change Notice

Issue Date: 3 Oct, 2017

Change Type:
Product upgrade

Parts Affected:

4x10Gb QSFP+ SR4 transceiver

AFBR-79EQDZ	AFBR-79EQPZ	AFBR-79EIDZ	SFBR-79EIPZ	AFBR-79EEPZ
AFBR-79EADZ	AFBR-79E3PZ	AFBR-79FIPZ		

Description and Extent of Change:

The following Mechanical changes apply

1) Housing change-sheet metal replacement of die cast for bottom half of clamshell housing. Top half remains die cast.
2) Housing change- minor change in top half die cast (screw holes removed, latch hole to anchor the new MPO interface)
3) MPO mechanical interface- this is the MPO latch internal to the port. This is changing from metal to plastic.
4) MPO internal shield – at the back of the MPO port, is a shield used to block EMI emissions. This is changing from metalized plastic to all metal shield.

Reason for Change:

The changes reduce EMI emissions (see below chart) allowing for higher switch port density. The piece part changes also consolidate supply chain within the QSFP series of transceivers.

Effect of Change on Fit, Form, Function, Quality, or Reliability:
There is no change to form, fit, function, quality and reliability of the products. The device specification and manufacturing process will be same as the current products. See attached Qualifcation data and EMI data.

Effective Date of Change:
Product shipments using this change will begin on or after Jan 5, 2018 (WW1801), or earlier with customer approval. Timing of shipment will depend on customer demand and inventory on-hand of current products.

Recommended Actions to be Taken by Customer:
Please return any response as soon as possible, but not to exceed 90 days.

Qualification Data:
Qualification tests were performed according to the plan outlined below.

Leg	Test	Reference	Condition	Sample Size	Results

1	Un-Biased Damp Heat	MIL-STD-202 Method 103	Ta = 85°C, RH = 85%,	11	0/11 @ 1000hrs
2	Temperature Cycling	MIL-STD-883 Method 1010	Ta = -40°C to +100°C,	11	0/11 @ 500 cyc
3	Mechanical Shock	MIL-STD-883 Method 2002B	1500g, 0.5ms, 5shock/axis, 6axis	11	0/11
4	Mechanical Vibration	MIL-STD-883 Method 2007	20g, 20 to 2000Hz, 3axis, 4min/cycle, 4cycle/axis	11	0/11
5	Optical Mate / Demate	-	Test after 24th insertion. Clean. Test after 25th insertion. Continue up to 200 insertions.	11	0/11 @ 200 Insertion
6	Dust Test	TP-91	6 Mechanical samples	6	0/6
7	Wiggle Test	-	Per CISCO Document	11	0/11
8	EMI Test	Relevant standards	-	35	NA
9	Insertion / Extraction Force	Cisco EDCS- 164608 EIA-364-13B Refer to MSA when applicable	Measure electrical insertion and extraction force; Measure optical insertion and extraction for info. Insert/extract each test samples three times.	3	0/3 over MSA spec
10	FOCIS/MSA Measurement	Relevant FOCIS/MSA Standard	-	11	0/11

Emissions Margin to FCC Class A

Version	No. of Ports	Frequency (GHz	Pol	Pea Emission (dBuV)	FCC Class A Peak Linit (dBuV)	Peak Margin (dB)	AVG Emission	FCC Class A AVG Limit (dBuV)	AVG (dB)
Current Design	32	10.312436	Vert	59.465	80	-20.535	59.999	60	-0.001
New Design	32	10.312352	Vert	51.041	80	-28.959	51.726	60	-8.274
								Delta:	-8.273

These changes have been reviewed and approved by FIT engineers and managers per FIT's procedure.

Please contact your Broadcom Limited field sales engineer or Contact Center for any questions or support requirements. Please return any response as soon as possible, but not to exceed 30 days.