BROADCOM

PCN: V20-010-E47540A-MA

Product Change Notice

Issue Date: April 6, 2020

Change Type:

New transciever platform design.

Parts Affected:

Please see Appendix.

Description and Extent of Change:

Conversion of the 25Gb Ethernet SFP28 short reach (850nm) series of products to a 2nd generation platform design which supports dual operating modes (dual data-rates 25G and 10G).

Reason for Change:

Consolidate the 25Gb Ethernet SFP28 short reach (850nm) into a single platform in order to improve long term supply assurance for customers. The 2nd generation will support 25GE SR, 10G/25GE SR and 10G/25GE eSR to facilitate end user migration from 10G to 25G link interconnect bandwidth.

Effect of Change on Fit, Form, Function, Quality, or Reliability:
There is no change to the form, fit, function, quality and reliability of the product. The principle differences in the bill of material between the Gen1 and Gen 2 platform designs are outlined in Table 1. Broadcom has completed full reliability qualification testing on the Gen2 product build standard (see summary of results in Table 2).

Table 1: 25GE Gen 1 vs Gen 2 comparison

	AFBR-725x (25G SR Gen 1)	AFBR-735x (25G SR Gen 2)
Status	Released/GA	Released/GA
Broadcom PN	AFBR-725SMZ	AFBR-735SMZ
VCSECL	V-1 (25G)	V-1 (25G)
PIN	PD-1	PD-1
Lens-Tx	L-1	L-2-25G
Lens-Rx		L-SFP's
PCBA	P-1	P-2
CDR	Broadcom	MACOM
Controller	uC-1	uC-2
Mechanicals	M-1	M-1'

Effective Date of Change:
Product shipments using this change (Gen2) will begin within 90 days of customer approval. Timing of shipment to specific customers will depend on customer demand and inventory on-hand of current product.

AFBR-725x (Gen1) Series Product - End of Life Details:

Broadcoms will discontinue production shipments of the AFBR-725x (Gen1) series products.
Last time buy schedule:

	Last Time Order	Last Time Ship
AFBR-725x (Gen1)	October 6, 2020	March 6, 2021

Recommended Actions to be Taken by Customer:

Evaluation samples of the Gen2 products are available. Please contact your Broadcom Sales representative.

Qualification Data:

Table 2: Full qualification report is available upon request.

Leg	Test	Reference	Stress Condition	Sample Size	Result
1	High Temperature Operating Life (HTOL)	GR-468-CORE Section 3.4.1	Tcase = 70°C, Vcc=3.3V Qual Release: 2000Hrs	11	0 Failure @ 2000 Hrs
2	High Temperature Storage (HTS)	GR-468-CORE Section 3.4.1	Ta = 85°C Qual Release: 2000Hrs	11	0 Failure @ 2000 Hrs
3	Temperature Cycling (TMCL)	MIL-STD-883 Method 1010	Ta = -40°C/85°C 15 min. dwell @ Cold & Hot Temp Qual Release: 500 Cyc	11	0 Failure @ 500 Cyc
4	Biased Damp Heat (BDH)	MIL-STD-202 Method 103	Tcase = 70°C, RH=85% Vcc=3.3V Qual Release: 1000Hrs	11	0 Failure @ 1000 Hrs
5	Un-Biased Damp Heat (uBDH)	MIL-STD-202 Method 103	Ta = 85°C, RH = 85% Qual Release: 1000Hrs	11	0 Failure @ 1000 Hrs
6	Biased Cyclic Moisture Resistance (BCMR)	MIL-STD-883 Method 1004	Ta = -10°C to +65°C, Biased, Power On/Off @30min, 95%RH Qual Release: 20 Cyc	11	0 Failure @ 20 Cyc
7	Mechanical Shock (MS) + Mechanical Vibration (MV)	MS: MIL-STD-883 Method 2002B	1500g, 0.5ms, 5 shock/axis, 6 axis	11	0 Failure @ post MS + MV
		MV: MIL-STD-883 Method 2007	20g, 20 to 2000Hz, 3 axis, 4min/cycle, 4cycle/axis		
8	Thermal Shock (TS)	MIL-STD-883 Method 1011.9	Ta= -40°C/85°C 5 min dwell @ Cold & Hot Temp Qual Release: 20 Cyc	11	0 Failure @ 20 Cyc
9	Air Discharge	IEC 61000-4-2	15KV	3	0 Failure @ post test
10	Contact Discharge	IEC 61000-4-2	8KV	3	0 Failure @ post test
11	In-Direct Discharge	IEC 61000-4-2	15KV	3	0 Failure @ post test
12	ESD-HBM	JS-001-2017	1KV (High Speed Pins) 2KV (Low Speed Pins)	6	0 Failure @ Post
13	Proof Test	GR-326-CORE	Required: 4.5 Kgf Apply load for 5sec. Take measurement after remove load for 10 sec.	11	0 Failure
14	Insertion / Extraction Test	EIA-364-13B	FOCIS/MSA Spec	3	0 Failure
15	Wiggle	EDCS-287599	Load=0.5lbs	11	0 Failure
16	Optical Mate / Demate	GR-326-CORE GR-1435-CORE	200 Insertions	11	0 Failure @ 200 Insertions
17	Electrical Mate / Demate	GR-1217-CORE EDCS-164608	200 Insertions	11	0 Failure @ 200 Insertions
18a	End Cap Shipping	-	Same as MS/MV . Endcap remain in place without packaging retention features pushing on endcap.	5	0 Failure
b	End Cap Abrasion	-	200 Insertion No particles on Endface @ 200X or Endcap @ 10x	5	0 Failure
19	Mixed Flowing Gas	GR-63-CORE	Non - Controlled Environment (10 Days @ 30°C, 70%RH, 20ppb Cl2, 100 ppb H2S, 200 ppb NO2, 200 ppb SO2, Balance - Air)	3	0 Failure
20	Dust Test	GR-326-CORE	4 Dust Application cycle per spec	5 Functional + 5 Mech	0 Failure
21	Good Device Analysis	-	-	1	No anomaly

Appendix:

Affected Product Part Numbers:

Affected Products	Description	NEW Gen2 Product
AFBR-725ADMZ	25GE/10GE SFP28 SR, 0/85C, 5E-5 BER (70m/100m OM3/OM4), MP bail	AFBR-735ADMZ
AFBR-725ADMZ-FT	25GE/10GE SFP28 SR, 0/85C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725ADMZ-IN	25GE/10GE SFP28 SR, 0/85C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725ADMZ-FT1	25GE/10GE SFP28 SR, 0/85C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725AMMZ	25G CPRI SFP28 SR, Ethernet/CPRI (70m/100m OM3/OM4)	AFBR-735JAMZ
AFBR-725AMMZ-H	25G CPRI SFP28 SR, Ethernet/CPRI (70m/100m OM3/OM4)	
AFBR-725AMMZ-HW1	25G CPRI SFP28 SR, Ethernet/CPRI (70m/100m OM3/OM4)	
AFBR-725ASMZ	25GE SFP28 SR, 0/85C, 5E-5 BER (70m/100m OM3/OM4), MP bail	AFBR-735ASMZ
AFBR-725DMZ	25GE/10GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	AFBR-735DMZ
AFBR-725EMZ-HP3	25GE SFP28 eSR, 0/70C, 5E-5 BER (170m/300m OM3/OM4), MP bail	AFBR-735EMZ
AFBR-725SMZ	25GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	AFBR-735SMZ
AFBR-725SMZ-AR1	25GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725SMZ-BR1	25GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725SMZ-DC1	25GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725SMZ-DC5	25GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725SMZ-E1	25GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725SMZ-EX	25GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725SMZ-FT1	25GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725SMZ-HP1	25GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725SMZ-HP3	25GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725SMZ-JU1	25GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725SMZ-LV	25GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725SMZ-LV	25GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725SMZ-NA1	25GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725SMZ-NA	25GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725SMZ-OR1	25GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725SMZ-SY1	25GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725SMZ-EX1	25GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725SMZ-LV8	25GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725SMZ-LV9	25GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725SMZ-NA2	25GE SFP28 SR, 0/70C, 5E-5 BER (70m/100m OM3/OM4), MP bail	
AFBR-725TMZ	25GE SFP28 SR, 0/70C, 1E-12 BER (70m/100m OM3/OM4), MP bail	AFBR-735TMZ
AFBR-725TMZ-EX1	25GE SFP28 SR, 0/70C, 1E-12 BER (70m/100m OM3/OM4), MP bail	
AFBR-725TMZ-FT1	25GE SFP28 SR, 0/70C, 1E-12 BER (70m/100m OM3/OM4), MP bail	
AFBR-725TMZ-IN	25GE SFP28 SR, 0/70C, 1E-12 BER (70m/100m OM3/OM4), MP bail	
AFBR-725TMZ-NA1	25GE SFP28 SR, 0/70C, 1E-12 BER (70m/100m OM3/OM4), MP bail	
AFBR-725TMZ-NA2	25GE SFP28 SR, 0/70C, 1E-12 BER (70m/100m OM3/OM4), MP bail	
AFBR-725TMZ-IN1	25GE SFP28 SR, 0/70C, 1E-12 BER (70m/100m OM3/OM4), MP bail	

Please contact your Broadcom field sales engineer or Contact Center (https://www.broadcom.com/) for any questions or support requirements. Please return any response as soon as possible, but not to exceed 30 days.