

PA-241900

Product Advisory

Issue Date: 23-December-2021

Change Description:

This advisory serves to notify Broadcom customers of our intent to qualify Nanya GX92/SR7300 substrates for products: Invader, Fury, Intruder and Cutlass.

Parts Affected:

500020645
500020647
500020654
500021738
500020657
500020660
SR01-0A10-00
SR01-0A10-01
SR01-0A10-02
SR01-0A10-03
SI00-0A10-00
SR00-0A10-00
SR00-0A10-01
SR00-0A10-02
SR00-0A10-03
SI01-0A10-00

Description and Extent of Change:

Nanya is an approved substrate supplier for Broadcom products. The current material set uses GX13/AUS703 for substrate manufacturing. Our plan is to qualify the more widely-used GX92/SR7300 materials. The substrate design and its performance remains unchanged.

Substrate Item	Current	Plan	Comments
Design	UMTC substrate design	Nanya substrate design	No change
Dielectric constant	3.2	3.2	No change
Line spacing	UMTC substrate design	Nanya substrate design	No change
Loss Tangent	<0.020	<0.020	No change
Build-up/solder mask material	GX13/AUS703	GX92/SR7300	Minor change
CTE x-y (ppm: 25-150°C) by tensile TMA (ppm: 25-150°C) by tensile TMA	46 120	39 117	Minor change
Solder mask color	Will be provided	Will be provided	Color tone variation only

widely-used type.

2. To mitigate substrate supply shortage the industry is experiencing & thus reducing risk to supply continuity.

Effect of Change on Fit, Form, Function, Quality, or Reliability:

The device specification is unchanged to ensure product electrical performance remains the same. This notification is being sent based on successful completion of engineering assessments. Internal qualification tests are in-progress and implementation occurs upon successful completion.

Effective Date of Change:

Product shipments using this change will begin after 9-May-2022. The transition will vary by part number depending on qualification completion, customer demand, and inventory levels.

Qualification Data:

Internal Broadcom Qualification Plan: (In-progress, estimated completion: 6-May-2022)

Test vehicle:	Invader
Package type:	FCBGA
Package size:	29x29 mm ²
Substrate Supplier:	Nanya
Build-up material:	GX92
Solder Mask:	SR7300
Preconditioning (MSL 4/245°C prior to TC, uHAST, HTS)	75 x 3 lots
Unbiased HAST 130°C/85%RH, 96 hr	25 x 3 lots
Temp Cycle -55 to +125°C, 700cyc	25 x 3 lots
High Temp Storage 150°C, 1000hr	25 x 3 lots

Please contact your Broadcom field sales engineer or Contact Center for any questions or support requirements. Please acknowledge the receipt of the notice within 30 days of delivery. Lack of acknowledgement within 30 days constitutes acceptance of the change per JEDEC J-STD-046.

