

Product Advisory

Issue Date: 24-February-2022

Change Description:

This advisory serves to notify Broadcom customers of our intent to qualify Kinsus substrates for Invader and Fury.

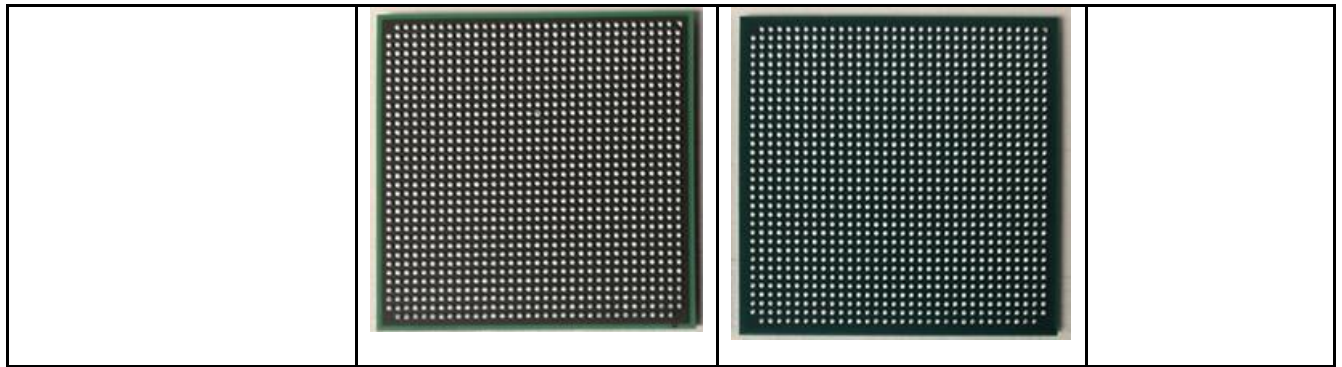
Parts Affected:

Device Family	Part Number	Part Description
Invader	500020645	SAS3108C0-1-DB
Invader	500020647	SAS3108C0-2-DB
Invader	500020654	SAS3108C0-8-DB
Invader	500021738	SAS3108DC0-DB
Invader	500020645	SAS3108C0-1-DB
Fury	500020657	SAS3008C0-1-DB
Fury	500020660	SAS3008C0-2-DB

Description and Extent of Change:

Qualifying Kinsus substrate and change of build-up material/solder mask from GX13/AUS703 to the more widely-used materials, GX92/SR7300 in substrate manufacturing. The substrate design and its performance remains unchanged.

Substrate Item	Current	Plan	Comments
Design	UMTC substrate design	Kinsus substrate design	No change
Dielectric constant	3.2	3.2	No change
Line spacing	UMTC substrate design	Kinsus 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			Color tone variation only



Reasons for Change:

1. To mitigate substrate supply shortage the industry is experiencing & thus reducing risk to supply continuity.
2. To standardize build-up/solder mask material in substrate manufacturing by changing to a more widely-used type.

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 3-June-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: 29-Apr-2022)

Test vehicle:	Invader
Package type:	FCBGA
Package size:	29x29 mm ²
Substrate Supplier:	Kinsus
Build-up material:	GX92
Solder Mask:	SR7300
Preconditioning (MSL 4/ 250 °C prior to TC and Unbiased HAST)	50 x 3 lots
Unbiased HAST 130 °C/85% RH, 96 hours	25 x 3 lots
Temp Cycle -55 to +125 °C, 700 cycles	25 x 3 lots
High Temp Storage 150 °C, 1000 hours	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.