



PRODUCT / PROCESS CHANGE NOTIFICATION

PCN-000769

Date: AUG-15-2022

P1/1

Semtech Corporation, 200 Flynn Road, Camarillo CA 93012			
Change Details			
Part Number(s) Affected: GV7700-INE3		Customer Part Number(s) Affected: ☒ N/A	
Description, Purpose and Effect of Change: Semtech will begin dual sourcing of GV7700-INE3 as part of its ongoing Supply Security Program.			
Existing assembly source		New assembly source	
ASEM		HuaTian XiAn (HTXA)	
Change Classification	☒ Major ☐ Minor	Impact to Form, Fit, Function	☐ Yes ☒ No
Impact to Data Sheet	☐ Yes ☒ No	New Revision or Date	☒ N/A
Impact to Performance, Characteristics or Reliability: There is no impact to form, fit, function, performance, characteristics, or reliability.			
Implementation Date	NOV-15-2022	Work Week	WW47
Last Time Ship (LTS) Of unchanged product	N/A	Affecting Lot No. / Serial No. (SN)	N/A
Sample Availability	JUL-01-2022	Qualification Report Availability	AUG-03-2022
Supporting Documents for Change Validation/Attachments: PRODDOC026990 Rev. 0 Reliability Qualification Report for GV7700 Assembly in HTXA			

Issuing Authority	
Semtech Business Unit:	Signal Integrity Product Group (SIP)
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FOR FURTHER INFORMATION & WORLDWIDE SALES COVERAGE: http://www.semtech.com/contact/index.html#support	



Reliability Qualification Report for GV7700 Assembly in HTXA

Revision History

Version	ECO	Date	Modifications
0	ECO-062678	Jul 2022	New Release

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1 Background

GV7700 is currently assembled at Greatek, Taiwan. To meet customer demand and to ensure timely delivery, a dual source qualification at HuaTian XiAn (HTXA) was initiated. The purpose of this qualification is to qualify HTXA as a second assembly site for GV7700.

2 Product Scope

The only product affected by this change is GV7700. Please find more details about the package type and lot numbers of parts used in this qualification in table 1 below.

Table1: Package type and lot number information for GV7700 used in this qualification.

Semtech Device Codes	GV7700
Package Type	7x7mm 84L QFN
Lot Numbers	A674E1, B674E3, C674E3

3 Qualification Approach

GV7700 has already been fully qualified previously. Please refer to GV7700 reliability qualification report for more information (PRODDOC010275). This qualification only intends to assess the reliability impact of having GV7700 assembled at HTXA. Thus, die-level reliability stresses (HTOL, ESD and LU) were not planned. TC, UHAST and HTS were carried out on 3 lots of GV7700 at the vendor side. A separate biased HAST was carried out independently on 3 lots at ICE for information. CSAM was performed on all parts at T0, post MSL (if applicable) and post stresses. Please refer to table 2 in section 4, for more details about the qualification stresses and sample size,

4 Reliability Qualification Stresses

Table 3: Reliability qualification stresses for GV7700 assembled at HTXA

Stress Test	Conditions	Duration	Qualification Vehicle	Sample Size	Result
High Temperature Storage (HTS)	JESD22-A103				
	CSAM	1000 hours	GV7700	80 pcs/lots * 3 lots	Pass
	T=150 °C				
Unbiased HAST	JESD22-A118				
	MSL3 preconditioning and CSAM,	96hrs	GV7700	80 pcs/lots * 3 lots	Pass
	130°C, 85 % RH,				
TC	JESD22-A104				
	MSL3 preconditioning and CSAM,	1000 cycles	GV7700	80 pcs/lots * 3 lots	Pass
	-40°C to +125°C (Condition G)				
Biased HAST	JESD22-A110				
	MSL3 preconditioning ad CSAM,	96hrs	GV7700	30 pcs/lots * 3 lots	Pass
	130°C, 85 % Rh				

5 Conclusion

In conclusion, GV7700 assembled at HuaTian XiAn (HTXA) successfully passed required reliability stresses. Thus, HTXA can be considered as a qualified assembly site for Semtech's GV7700.