

Product Alert Notification (PAN)

Subject: Product Alert – Product ISL72991*
Publication Date: 2/7/2024

Revision Description:
Initial Release

Product Alert Notification: Product shipped without correct testing of the Load Regulator per SMD.

Renesas shipped product without correctly testing the load regulator parameters in the SMD. Product was specified to have min/max values of -12 / +12mV in the 3mA < IO < 1A range respectively per the SMD, but the testing program did not apply the correct loading range to correctly register a value. All product shipped since product was launched was tested on this erroneous test program and therefore compliance cannot be verified for this load regulator parameter. See below Table 1 for the full list of impacted products.

Renesas Part #	DLA SMD Part #	SMD		Change Description
		Old Rev#	New Rev#	
ISL72991QF	5962-0250301QXC	E	F	See Appendix A
ISL72991RHF/PROTO	NA	NA	NA	NA
ISL72991RHQF	5962F0250301QXC	E	F	See Appendix A
ISL72991RHQFS2793	5962F0250301QXC	E	F	See Appendix A
ISL72991RHVF	5962F0250301VXC	E	F	See Appendix A
ISL72991RHVFS2793	5962F0250301VXC	E	F	See Appendix A
ISL72991RHX	5962F0250301V9A	E	F	See Appendix A
ISL72991RHX/SAMPLE	NA	NA	NA	NA

Table 1. Affected product list.

All product shipped to date did not have the load regulator tested correctly due to an error in the testing program. When tested correctly, the product fails the load regulator spec in the RevE SMD. The corrective action is twofold;

- 1) Update the test program to apply correct load. Implemented on 11/21/23. All product tested after 11/21/23 uses the corrected program. All product shipped prior to this date cannot guarantee compliance for the load regulator parameter.
- 2) Update the SMD to reflect the products actual performance for the load regulator parameter when tested correctly. The updated SMD is RevF and was released Jan24, 2024.

See Table 2 below for the updated SMD revision information.

Renesas Part #	DLA SMD Part #	Renesas Part #	DLA SMD Part #
ISL72991QF	5962-0250301QXC	ISL72991RHVF	5962F0250301VXC
ISL72991RHF/PROTO	NA	ISL72991RHVFS2793	5962F0250301VXC
ISL72991RHQF	5962F0250301QXC	ISL72991RHX	5962F0250301V9A
ISL72991RHQFS2793	5962F0250301QXC	ISL72991RHX/SAMPLE	NA

Table 2. SMD revision summary for products impacted.

A full 8D reporting is available upon request.

Customers wishing to return impacted products should contact their distributor or Renesas Customer Sales team for coordination. Renesas apologizes for the inconvenience caused due to this event.

For additional information regarding this notice, please contact your regional change coordinator (below)			
Americas: PCN-US@RENESAS.COM	Europe: PCN-EU@RENESAS.COM	Japan: PCN-JP@RENESAS.COM	Asia Pac: PCN-APAC@RENESAS.COM

Appendix A. Description of changes to the SMD for all products impacted.

Parameter	From	To	Description	SMD Page
VLDR Load Regulation			Updated MIN & MAX Voltage	5
	T=25C	T=25C, 125C, -55C		
	MIN: -12mV, MAX: +12mV	MIN: -60mV, MAX: +60mV		
	T=125C, -55C			
	MIN: -15mV, MAX: +15mV			
VDO Dropout Voltage			UPDATED Upper Spec	5
	T=25C	T=25C		
	MAX: 0.2V	MAX: 0.3V		
ICL Current Limit			UPDATED Upper Spec	6
	T=25C, 125C, -55C	T=25C, 125C, -55C		
	MAX: 0.9A	MAX: 0.95A		

SMD Rev F changes highlighted Pg 5.

Load regulation	VLDR	3 mA ≤ IO ≤ 1 A,	1, 2, 3	01	-42 -60	+12 +60	mV
		VIN = -7 V, VO = -5 V	2, 3		-45	+45	
		M, D, P, L, R, F 2/ 3/	1		-42 -60	+12 +60	
Line regulation	VLNR	IO = 100 mA,	1, 2, 3	01	-25	+25	mV
		VO – 1.0 V ≥ VIN ≥ -30 V					
		M, D, P, L, R, F 2/ 3/	1		-25	+25	
Dropout voltage	VDO	IO = 100 mA,	1, 2, 3	01		0.2 0.3	V
		ΔVO ≤ 50 mV	2, 3			0.3	
		M, D, P, L, R, F 2/ 3/	1			0.2 0.3	
		IO = 1 A, ΔVO ≤ 50 mV	1, 2, 3			1.0	
		M, D, P, L, R, F 2/ 3/	1			1.0	
See footnotes at end of table.							
STANDARD MICROCIRCUIT DRAWING DLA LAND AND MARITIME COLUMBUS, OHIO 43218-3990			SIZE A		5962-02503		
				REVISION LEVEL F	SHEET 5		

SMD Rev F changes highlighted Pg 6.

Current limit	ICL	RCL = 3.7 kΩ	1,2,3	01	0.6	0.9 0.95	A
		M,D,P,L,R,F 2/ 3/	1		0.6	0.9 0.95	

1/ VO = -1.5 ≥ VIN, IO = 100 mA, CO = 47 μF, SD = 0 V.

2/ The RHA devices supplied to this drawing meet all levels M, D, P, L, R, F of irradiation (classes M, Q, and V). However, this device is only tested at the "F" level (classes M, Q, and V). Pre and Post irradiation values are identical unless otherwise specified in table I. When performing post irradiation electrical measurements for any RHA level, TA = +25°C.

3/ These parts may be dose rate sensitive in a space environment and may demonstrate enhanced low dose rate effects. Radiation end point limits for the noted parameters are guaranteed only for the conditions as specified in MIL-STD-883, method 1019, condition A.

STANDARD MICROCIRCUIT DRAWING DLA LAND AND MARITIME COLUMBUS, OHIO 43218-3990	SIZE A		5962-02503
		REVISION LEVEL F	SHEET 6