



Integrated Device Technology, Inc.  
6024 Silver Creek Valley Road, San Jose, CA 95138

## PRODUCT/PROCESS CHANGE NOTICE (PCN)

PCN #: <b>N1710-01</b> Product Affected: 8V49NS0312NLGI(8)	Date: November 8, 2017	<b>MEANS OF DISTINGUISHING CHANGED DEVICES:</b> <input type="checkbox"/> Product Mark <input type="checkbox"/> Back Mark <input type="checkbox"/> Date Code <input checked="" type="checkbox"/> Other      Datasheet change only
Date Effective: February 8, 2018		

Contact: TSD Clock Team E-mail: <a href="mailto:clocks@idt.com">clocks@idt.com</a>	Attachment: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Samples: Samples are available now.
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**DESCRIPTION AND PURPOSE OF CHANGE:**

<input type="checkbox"/> Die Technology <input type="checkbox"/> Wafer Fabrication Process <input type="checkbox"/> Assembly Process <input type="checkbox"/> Equipment <input type="checkbox"/> Material <input type="checkbox"/> Testing <input type="checkbox"/> Manufacturing Site <input checked="" type="checkbox"/> Data Sheet <input type="checkbox"/> Other	<p>This notice is to advise our customers that the QD fractional output divider's max. frequency is updated to 138MHz to meet period jitter compliance.</p> <p>There is no change to the die/package technology or manufacturing. The change in datasheet parameters is shown in Table 28.</p> <p>In the event frequency is higher than 138MHz , output clock will have higher period jitter. As such, IDT would like to recommend customer to use 8V49NS0412 if they need to run above 138MHz since the two devices are drop in compatible.</p>
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**RELIABILITY/QUALIFICATION SUMMARY:**

There is no change in die technology/process.

**CUSTOMER ACKNOWLEDGMENT OF RECEIPT:**

IDT records indicate that you require written notification of this change. Please use the acknowledgement below or E-Mail to grant approval or request additional information. If IDT does not receive acknowledgement within 30 days of this notice it will be assumed that this change is acceptable.

IDT reserves the right to ship either version manufactured after the process change effective date until the inventory on the earlier version has been depleted.

Customer: _____	<input type="checkbox"/> <i>Approval for shipments prior to effective date.</i>
Name/Date: _____	E-Mail Address: _____
Title: _____	Phone # /Fax #: _____

**CUSTOMER COMMENTS:** \_\_\_\_\_

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**IDT ACKNOWLEDGMENT OF RECEIPT:**

RECD. BY: \_\_\_\_\_ DATE: \_\_\_\_\_



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## PRODUCT/PROCESS CHANGE NOTICE (PCN)

### ATTACHMENT 1 - PCN #: N1710-01

**PCN Type:** Datasheet Revision Change

**Data Sheet Change:** Yes

**Detail of Change:** This notice is to advise our customers that the QD fractional output divider's max. frequency is updated to 138MHz to meet period jitter compliance.

There is no change to the die/package technology or manufacturing. The change in datasheet parameters is shown in Table 28.

In the event frequency is higher than 138MHz, output clock will have higher period jitter. As such, IDT would like to recommend customer to use 8V49NS0412 if they need to run above 138MHz since the two devices are drop in compatible.

**Datasheet Changes: Table 28**

From:

AC Electrical Characteristics							
Table 28: AC Characteristics, <sup>a</sup> V <sub>CC,X</sub> <sup>b</sup> = V <sub>CCO,X</sub> <sup>c</sup> = 3.3V±5%, T <sub>A</sub> = -40°C to +85°C, V <sub>EE</sub> = 0V							
Symbol	Parameter	Test Conditions	Minimum	Typical	Maximum	Units	
f <sub>VCO</sub>	VCO Frequency		2400		2500	MHz	
f <sub>PFD</sub>	Phase / Frequency Detector Frequency		5		200	MHz	
f <sub>OUT</sub>	Output Frequency	QA[0:3] nQA[0:3] QB[0:3] nQB[0:3] QC[0:1] nQC[0:1]	10.91		2500	MHz	
		QD0, nQD0	Integer Divider Selected	10.91		2500	MHz
			Fractional Divider Selected	20		250	MHz
		QD1	Integer Divider Selected	10.91		250	MHz
			Fractional Divider Selected	20		250	MHz
tsk(b)	Bank Skew <sup>d, e, f</sup>	Bank A	Same Frequency and Output Type Only valid for skew between outputs in the same bank		45	ps	
		Bank B		45			
		Bank C		20			

To:

AC Electrical Characteristics							
Table 28: AC Characteristics, <sup>a</sup> V <sub>CC,X</sub> <sup>b</sup> = V <sub>CCO,X</sub> <sup>c</sup> = 3.3V±5%, T <sub>A</sub> = -40°C to +85°C, V <sub>EE</sub> = 0V							
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		QD0, nQD0	Integer Divider Selected	10.91		2500	MHz
			Fractional Divider Selected	20		138	MHz
		QD1	Integer Divider Selected	10.91		250	MHz
			Fractional Divider Selected	20		138	MHz
tsk(b)	Bank Skew <sup>d, e, f</sup>	Bank A	Same Frequency and Output Type Only valid for skew between outputs in the same bank		45	ps	
		Bank B		45			
		Bank C		20			