



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

PRODUCT/PROCESS CHANGE NOTICE (PCN)

ATTACHMENT 1 - PCN # : A1108-03R1

PCN Type: New Die and Material Change

Data Sheet Change: Yes

Detail Of Change:

Revision 1: This revised notification is to advise customers of the plan to change from dual capacitor to single capacitor on this product. Qualification has been completed and the result is as shown in Page 4.

IDT has made a die change from die option 097 to die option 207 for the affected parts listed on this PCN. The change will enhance electrical performance, decrease power consumption and increase device's robustness.

The new die option cut-off datecode is 1147. This die option was fully verified and characterized with functionality and evaluated against datasheet parameters. Refer below for other spec parameters that were updated due to this change. There are no changes to the orderable part#.

	FROM	TO
Page 1 Features: Typical RMS phase jitter @ 669.3266MHz (12KHz - 20MHz)	0.384ps	0.359ps
Table 2A: Typical Input Capacitance (FSEL[1:0],SDATA,SCLK), Cin	4pF	5.5pF
Absolute Maximum Ratings: Supply Voltage, Vcc	4.5V	3.63V
Table 5A: Max Power Supply Current, Iee	200mA	150mA
Table 5B: Max Power Supply Current, Iee	190mA	145mA
Table 6B: Cycle to Cycle Jitter, Vcc 3.3V±5%	16 ps	15 ps
Cycle to Cycle Jitter, Vcc 2.5V±5%	26 ps	15 ps
Typical RMS Phase Jitter	0.384 ps	0.359 ps
Typical Single-side Band Phase Noise, 100Hz from Carrier	-65 dBc/Hz	-67.3 dBc/Hz
Single-side Band Phase Noise, 1kHz from Carrier	-93.59 dBc/Hz	-95.3 dBc/Hz
Single-side Band Phase Noise, 10kHz from Carrier	-113.22 dBc/Hz	-114.23 dBc/Hz
Single-side Band Phase Noise, 100kHz from Carrier	-116.9 dBc/Hz	-117.36 dBc/Hz
Single-side Band Phase Noise, 1MHz from Carrier	-129.13 dBc/Hz	-129.93 dBc/Hz
Single-side Band Phase Noise, 10MHz from Carrier	-136.82 dBc/Hz	-136.78 dBc/Hz
Min/Maximum Output Duty Cycle, odc	43% / 57%	44% / 56%
Maximum Device Start-up Time	10 ms	20 ms
Page 13: Typical Phase Noise at 669.3266MHz RMS phase jitter (Random)	0.384ps	0.359ps
12Hz - 20MHz		
Page 17: POWER CONSIDERATIONS Tj for an ambient temperature of 85°C	113.4°C	106.6°C
with all output switching		



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IDT has qualified the new Die Attach material JM7000 for CD10 package.

The qualification result details are as follows:

Affected Packages: CDIP 10 (CD10)

Assembly Material: The affected package types will be assembled at Tai-Saw using the same ceramic substrate and design.

Sample Availability: Please contact your IDT sales representative for your sample request and availability.

Qualification Test Plan:

(I) Die attach material change

Following tests were performed on three assembly lots.

Test Description	Test Method	Lot# 1 (SS/Rej)	Lot# 2 (SS/Rej)	Lot# 3 (SS/Rej)
Temperature Cycling + End Point Electrical Test (-55°C to 125°C, 1000 cycle)	JESD22-A104	25/0	25/0	25/0
Mechanical Shock + End Point Electrical (Cond B, 1500 G Peak)	MIL-STD-883, M 2002	15/0	15/0	15/0
Mechanical Vibration + End Point Electrical (20 to 2000 Hz/20GHz Peak)	JESD22-A103A	15/0	15/0	15/0
Fine/Gross Leak (M1014 Cond C1 / A1)	MIL-STD-883, M 1014	15/0	15/0	15/0
X-ray Examination	MIL-STD-883, M 2015	15/0	15/0	15/0
Internal Vapor Content	MIL-STD-883, M 1018	50/0	50/0	50/0
Internal Visual Inspection	MIL-STD-883, M 2010	3/0	3/0	3/0
Die Shear Test (> 2.5kg / 2500g)	MIL-STD-883, M 2019	5/0	5/0	5/0
Capacitor Shear Test (> 100g)	-	5/0	5/0	5/0



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Qualification Test Plan:

(II) Dual capacitor to Single capacitor change

Following tests were performed on three assembly lots.

Test Description	Test Method	Lot# 1 (SS/Rej)	Lot# 2 (SS/Rej)	Lot# 3 (SS/Rej)
Temperature Cycling + End Point Electrical Test (-55°C to 125°C, 1000 cycle)	JESD22-A104	34/0	34/0	34/0
Mechanical Shock + End Point Electrical (Cond B, 1500 G Peak)	MIL-STD-883, M 2002	15/0	15/0	15/0
Mechanical Vibration + End Point Electrical (20 to 2000 Hz/20GHz Peak)	JESD22-A103A	15/0	15/0	15/0
Fine/Gross Leak (M1014 Cond C1 / A1)	MIL-STD-883, M 1014	15/0	15/0	15/0
X-ray Examination	MIL-STD-883, M 2015	15/0	15/0	15/0
Internal Vapor Content	MIL-STD-883, M 1018	3/0	3/0	3/0
Internal Visual Inspection	MIL-STD-883, M 2010	5/0	5/0	5/0
Die Shear Test (> 2.5kg / 2500g)	MIL-STD-883, M 2019	5/0	5/0	5/0
Capacitor Shear Test (> 100g)	-	5/0	5/0	5/0



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ATTACHMENT 2 - PCN # : A1108-03R1

Affected IDT Part # List

<u>Part #</u>	<u>Package Type</u>
8N3Q001FCJI-001	CD10
8N3Q001FCJI-001T	CD10
8N3QV01ACJI-011	CD10
8N3QV01ACJI-011T	CD10
8N3QV01LCJI-034	CD10
8N3QV01LCJI-034T	CD10
8N3QV01KC-0017CDI	CD10
8N3QV01KC-0017CDI8	CD10
8N3QX01XCJ	CD10
8N3QX01XCJT	CD10
8N3QX01XCJI	CD10
8N3QX01XCJIT	CD10