



INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION
Generic Copy

19-FEB-2002

SUBJECT: ON Semiconductor Initial Product/Process Change Notification #12315

TITLE: Prescalers and Phase Detectors Product Line Announcement

EFFECTIVE DATE: 19-Jun-2002

AFFECTED CHANGE CATEGORY: ON Semiconductor Fab Site & Subcontractor Fab Site

AFFECTED PRODUCT DIVISION: Broadband Products

ADDITIONAL RELIABILITY DATA: Available

Contact your local ON Semiconductor Sales Office or Keith Stapley <RXNN90@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office
or Nellie Hernandez <RGX650@onsemi.com>

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact Sales Office or Tim Gurnett <R13617@onsemi.com>

DISCLAIMER:

Initial Product/Process Change Notification (IPCEN) - First Notification distributed to customers.
Distributed at least 120 days from the effective date of the change.

This is an 'early warning' about an upcoming change and contains general information regarding the change details and devices affected. It also contains at least a reliability qualification plan, but the actual qualification data will be identified in the Final Product/Process Change Notification (FPCN). This notification will be followed by a Final Product/Process Change Notification (FPCN) at least 60 days from effective date of change.

DESCRIPTION AND PURPOSE:

ON Semiconductor is pleased to announce that it has expanded its Broadband product portfolio with the addition of select Motorola prescalers and phase detectors products. Motorola currently manufactures the prescalers and phase detectors product in two wafer fabrication facilities: BMC for the MOSAIC3-based products and MOS6 for the MOSAIC5-based products.

ON Semiconductor will be transferring the MOSAIC3 portion of the prescalers and phase detectors portfolio to the Sony wafer fabrication facility located in San Antonio, Texas. The Sony wafer fab is concurrently being qualified to produce the MOSAIC3-based line of ECL logic products. Sony is QS9000 certified and has been certified to ISO 9002 since 1993 and to ISO 14001 since 1996. For a more detailed review of the Sony wafer fab transfer, download PCN 12049 at <http://www.onsemi.com>.



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ON Semiconductor will be transferring the MOSAIC5 portion of the prescalers and phase detectors portfolio to the COM1 Broadband Technology Center wafer fabrication facility in Phoenix, Arizona. The COM1 Broadband Technology Center wafer fab is qualified to produce the MOSAIC5-based line of ECL logic products. The COM1 facility is the ON Semiconductor center of excellence for advanced wafer fabrication techniques. For a more detailed review of the COM1 wafer fab transfer, download PCN 12052 at <http://www.onsemi.com>.

Device parameters will continue to meet all Data Book specifications, and reliability will continue to meet or exceed ON Semiconductor standards.

QUALIFICATION PLAN:

(All tests apply for qualification vehicles. Extrinsic Reliability Testing performed on a sample size of 1 lots with 80 pieces/lot+ 1 control lot with 80 pieces/lot)

Test	Conditions
High Temp Op Life (HTOL)	Tj =150DegC for 168 hours
Preconditioning for MSL-1 (PC)	IR at 235DegC for SOIC8/220DegC for PLCC, TC
PC-Temp Cycling (TC)	-65DegC to +150DegC; for 250 cycles
Bond Pull Strength (BPS)	Per Factory Testing with CpK>= 1.33
Bond Shear Test (BS)	Per Factory Testing with CpK>= 1.33
ESD per JEDEC Standard	Human Body Model(HBM) Machine Model (MM) Charge Device Model(CDM)
Destructive Physical Analysis (DPA)	Analysis done after PC-Temp Cycling
Critical Parameter Shifts Analysis (CPA)	Datalog units and examine VOH and VOL before and after test on all HTOL and Temp cycled units
Parameter Verification	Electrical Characterization/distribution summary of Critical Parameters

Qualification Vehicle Justification

Technology	Qualification Device	Reason Chosen
Prescaler	MC12026AD	SOIC8 pkg, MOSAIC3 array, high volume
	MC12093D	SOIC8 pkg, MOSAIC5 array
	MC10EL16D	SOIC8 pkg, MOSAIC3 array, same as MCH12140D & MCK12140D
	SC64046FN	28ld PLCC pkg, MOSAIC3 array, large die

CHANGED PART IDENTIFICATION:

Beginning in Q3 '02, customers may receive products manufactured with die from either the ON Semiconductor fabs (Sony, COM1) or the Motorola fabs. Not all parts will be transferred at once, but instead will be phased into the ON Semiconductor fabs over a period of several quarters in order to allow customers that require samples to complete the qualification process to their satisfaction. Customers are encouraged to contact ON Semiconductor to determine sample availability and to communicate sample requests.



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AFFECTED DEVICE LIST (WITHOUT SPECIALS)

PART

MC12026AD
MC12026ADR2
MC12080D
MC12080DR2
MC12093D
MC12093DR2
MC12095D
MC12095DR2
MCH12140D
MCH12140DR2
MCK12140D
MCK12140DR2
MCW12026A
MCW12080
MCW12093
MCW12095
MCWH12140
MCWK12140