



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION
Generic Copy

11-JULY-2003

SUBJECT: ON Semiconductor Final Product/Process Change Notification #12898

TITLE: Qualification of Additional Assembly/Test Site for ON Semiconductor Devices Packaged in SC70

EFFECTIVE DATE: 11-SEPT-2003

AFFECTED CHANGE CATEGORY: ON Semiconductor Assembly / Test Site

AFFECTED PRODUCT DIVISION: Bipolar Discretes Products Div

ADDITIONAL RELIABILITY DATA: Available
Contact your local ON Semiconductor Sales Office or Laura Rivers <S20636@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office
or Dianne Von Borstel <RPDR20@onsemi.com>

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact Sales Office or Brenda Cunningham <FFNNMJ@onsemi.com>

NOTIFICATION TYPE:

Final Product/Process Change Notification (FPCN)

Final change notification sent to customers. FPCNs are issued at least 60 days prior to implementation of the change.

ON Semiconductor will consider this change approved unless specific conditions of acceptance are provided in writing within 30 days of receipt of this notice. To do so, contact your local ON Semiconductor Sales Office.

DESCRIPTION AND PURPOSE:

This is the Final PCN, issued to complete the changes stated in IPCN #12898 - Qualification of Additional Assembly/Test Site for ON Semiconductor, located at www.onsemi.com.

In order to fully support our customer's requirements for devices packaged in SC70, the assembly and testing of these devices is being expanded into the LPS facility in Leshan, China. Currently the SC70 packaged devices are assembled and tested in ON Semiconductor's Seremban, Malaysia site. LPS already assembles and tests ON Semiconductor Discrete devices in the similar SC88A package, and is ISO9001 and TS16949 certified. All physical, as well as electrical characteristics will remain the same and the reliability will continue to meet ON Semiconductor's high quality standards.



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RELIABILITY DATA SUMMARY:

Qualification Vehicles: [Qualification by package similarity]
 MSQA6V1W5T2 [Die Qualified in SC88A package in SBN, Malaysia]
 MUN5115DW1T1 [SC88 Package Qualification in LPS, China]
 MC74VHC1G02DFT2 [SC88A Package Qualification in LPS, China]

| Qual Vehicle | Technology | Reason Chosen |
|---------------------|-------------------|---|
| MSQA6V1W5T2 | ZENER | Largest Die in Zener devices (26x27mil) |
| MUN5115DW1T1 | Bipolar BRT | Highest Gain (hFE = 160min) |
| MC74VHC1G02DFT2 | C-MOS | Highest Voltage (7V) |

Device = MC74VHC1G02DFT2

| Test | Conditions | Interval | SS |
|--------------|---|-----------------|-----------|
| UHASt +PC | Ta=130degC,P=18.8 psig, RH=85% | 96 hours | 0/80 |
| A/clave +PC | Ta=121degC,P=15psig, RH=100% | 96 hours | 0/252 |
| HAST +PC | Ta=130degC,P=18.8 psig, RH=85% Vcc=5V | 96 hours | 0/252 |
| HTB | Ta = 150 deg C. | 1008 hours | 0/252 |
| HTOL | Ta = 145 deg C, Vcc=5V | 1008 hours | 0/252 |
| Temp Cyc +PC | Ta = -65 to +150 deg C | 500 cycles | 0/252 |
| MSL1 | 24 hr bake@125degC +168 hr 85/85 +3IR @ 235 deg C + 1x Flux immersion + Alcohol + DI rinse + visual | Readout | 0/252 |

Device = MSQA6V1W5T2

| Test | Conditions | Interval | SS |
|-------------|---|-----------------|-----------|
| A/clave +PC | Ta=121degC,P=15psig,RH=100% | 96 hours | 0/80 |
| H3TRB | Ta = 85deg C/ 85%RH, Vr=2.4V | 504 hours | 0/80 |
| MSL1 | 24 hr bake@125degC +168 hr 85/85 +3IR @ 235 deg C + 1x Flux immersion + Alcohol + DI rinse + visual | Readout | 0/80 |

Device = MUN5115DW1T1

| Test | Conditions | Interval | SS |
|-------------|---|-----------------|-----------|
| A/clave +PC | Ta=121degC,P=15psig,RH=100% | 96 hours | 0/80 |
| H3TRB | Ta=85degC,RH = 85%, VCEs=40V | 504 hours | 0/80 |
| HTB | Ta = 150 deg C. | 1008 hours | 0/252 |
| HTRB | Ta = 150 deg C, VCEs = 40V | 1008 hours | 0/252 |
| Temp Cyc+PC | Ta = -65 to +150 deg C | 500 cycles | 0/252 |
| IOL +PC | Ta=25degC, delta Tj => 100degC | 15000 cycles | 0/252 |
| MSL1 | 24 hr bake@125degC +168 hr 85/85 +3IR @ 235 deg C + 1x Flux immersion + Alcohol + DI rinse + visual | Readout | 0/252 |

ELECTRICAL CHARACTERISTIC SUMMARY:

All electrical characteristics will remain the same.

**Final Product/Process Change Notification #12898****CHANGED PART IDENTIFICATION:**

The date code character on the device package will change per the new assy/test site. LPS assembled products will be identified by a 90 degree counter-clockwise rotation in the date code character. This rotation is with respect to products currently assembled in Seremban, Malaysia. This change is intended to help the customer easily identify the assembly site for their products.

After the expiration date of this notification, production shipments will contain material assembled from either the LPS or Seremban sites.

AFFECTED DEVICE LIST (WITHOUT SPECIALS):**PART**

2SA1576ART1
2SC4081RT1
BAS16WT1
BAT54SWT1
BAT54WT1
BAV70WT1
BAV99RWT1
BAV99WT1
BAW56WT1
BC846AWT1
BC846BWT1
BC847AWT1
BC847BWT1
BC847CWT1
BC848AWT1
BC848BWT1
BC848CWT1
BC856BWT1
BC857BWT1
BC857CWT1
BC858AWT1
BC858BWT1
DAP202U
M1MA141KT1
M1MA141WAT1
M1MA141WKT1
M1MA142KT1
M1MA142WAT1
M1MA142WKT1
M1MA174T1
MMBD330T1
MMBD352WT1
MMBD717LT1
MMBD770T1
MMBF2201NT1
MMBF2202PT1
MMBT2222AWT1
MMBT2907AWT1
MMBT3904WT1
MMBT3906WT1
MMBT4401WT1
MMBT4403WT1
MMBTA06WT1
MMBTA56WT1



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MSB1218A-RT1
MSB92ASWT1
MSB92AWT1
MSB92WT1
MSC3930-BT1
MSD1819A-RT1
MSD42SWT1
MSD42WT1
MUN5111T1
MUN5112T1
MUN5113T1
MUN5113T3
MUN5114T1
MUN5115T1
MUN5116T1
MUN5130T1
MUN5131T1
MUN5132T1
MUN5133T1
MUN5134T1
MUN5135T1
MUN5136T1
MUN5137T1
MUN5211T1
MUN5212T1
MUN5213T1
MUN5214T1
MUN5215T1
MUN5216T1
MUN5230T1
MUN5231T1
MUN5232T1
MUN5233T1
MUN5234T1
MUN5235T1
MUN5236T1
MUN5237T1
NSF2250WT1
NSVBAS16WT1
NSVBAT54SWT1
NSVBAT54WT1
NSVF2250WT1
NSVM1MA142WAT1
NSVM1MA142WKT1
NSVMUN5132T1
NSVMUN5212T1
SBAV70WT1
SBAV99WT1
SBAW56WT1
SMMBT2222AWT1
SMMBT2907AWT1
SMMBT3906WT1
SMUN5111T1
SMUN5112T1
SMUN5113T1
SMUN5113T3



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SMUN5114T1
SMUN5116T1
SMUN5211T1
SMUN5211T3
SMUN5213T1
SMUN5214T1
SMUN5216T1
SMUN5235T1