



| Title of Change: | Qualification of mold compound G700HF in DPAK package in both ON Semiconductor Vietnam (OSV) and ON Semiconductor Seremban Malaysia (SBN). | | | | | | | |
|---|--|--------------|------------------------|---------------|--------------|---------------|-----------------|------------|
| Proposed first ship date: | 6 December 2017 | | | | | | | |
| Contact information: | Contact your local ON Semiconductor Sales Office or <Trung.Dang@onsemi.com> | | | | | | | |
| Samples: | Contact your local ON Semiconductor Sales Office | | | | | | | |
| Additional Reliability Data: | Contact your local ON Semiconductor Sales Office or <cheanching.sim@onsemi.com> | | | | | | | |
| Type of notification: | This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 90 days prior to implementation of the change. ON Semiconductor will consider this change accepted, unless an inquiry is made in writing within 30 days of delivery of this notice. To do so, contact <PCN.Support@onsemi.com>. | | | | | | | |
| Change Part Identification: | The change will be identified by date code. Units with date code W49 2017 or later may be assembled with new material. | | | | | | | |
| Change category: | <input type="checkbox"/> Wafer Fab Change <input checked="" type="checkbox"/> Assembly Change <input type="checkbox"/> Test Change <input type="checkbox"/> Other _____ | | | | | | | |
| Change Sub-Category(s): | <input type="checkbox"/> Manufacturing Site Change/Addition <input checked="" type="checkbox"/> Material Change <input type="checkbox"/> Datasheet/Product Doc change <input type="checkbox"/> Manufacturing Process Change <input type="checkbox"/> Product specific change <input type="checkbox"/> Shipping/Packaging/Marking <input type="checkbox"/> Other: _____ | | | | | | | |
| Sites Affected: | <input type="checkbox"/> All site(s) <input type="checkbox"/> not applicable <input checked="" type="checkbox"/> ON Semiconductor site(s) : ON Dong Nai Province, Vietnam ON Seremban, Malaysia <input type="checkbox"/> External Foundry/Subcon site(s) | | | | | | | |
| Description and Purpose: | | | | | | | | |
| This Final Product Change Notification (FPCN) announces the plan to qualify mold compound G700HF on DPAK packaged devices in ON Semiconductor Vietnam (OSV) and ON Semiconductor Seremban Malaysia (SBN). This change is to improve product package robustness. Upon the expiration of this FPCN, these affected products will be assembled with the new mold compound. | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #92d050;"> <th style="width: 33%;">Material to be changed</th> <th style="width: 33%;">Before Change</th> <th style="width: 33%;">After Change</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Mold Compound</td> <td style="text-align: center;">EMC-GE8000CH4ES</td> <td style="text-align: center;">EMC-G700HF</td> </tr> </tbody> </table> | | | Material to be changed | Before Change | After Change | Mold Compound | EMC-GE8000CH4ES | EMC-G700HF |
| Material to be changed | Before Change | After Change | | | | | | |
| Mold Compound | EMC-GE8000CH4ES | EMC-G700HF | | | | | | |
| ON Semiconductor OSV and SBN are qualified site for DPAK Standard discrete packaged products and is ISO TS16949 certified. Products have been qualified to industrial requirements and continue remain as Pb-free, Halide free and RoHS compliant. | | | | | | | | |

**Reliability Data Summary:****QV DEVICE NAME:** STD110N02RT4G (Mosfet)**PACKAGE:** DPAK

| Test | Specification | Condition | Interval | Result |
|-------|------------------------------------|---|-----------|--------|
| HTRB | JESD22-A108 | Ta = 175 °C, bias = 100% of rated V | 1008 hrs | 0/84 |
| HTGB | JESD22-A108 | Ta = 175°C, 100% max rated Vgss | 1008 hrs | 0/84 |
| HTSL | JESD22-A103 | Ta = 175 °C | 1008 hrs | 0/84 |
| IOL | MIL-STD-750 (M1037) AEC-Q101 | Ta=+25°C, deltaTj=100°C max, Ton = Toff = 2min | 15000 cyc | 0/84 |
| TC | JESD22-A104 | Ta = -55°C to +150°C | 1000 cyc | 0/84 |
| AC | JESD22-A102 | 121°C, 100% RH, 15psig, unbiased | 96 hrs | 0/84 |
| H3TRB | JESD22-A101 | 85°C, 85% RH, bias = 80% of rated V | 1008 hrs | 0/84 |
| PC | J-STD-020 JESD-A113 | MSL 1 @ 260 °C | | 0/336 |
| RSH | JESD22- B106 | Ta = 265°C, 10 sec | | 0/30 |
| SD | JSTD002 | Ta = 245°C, 10 sec | | 0/15 |

QV DEVICE NAME: NJVMJD350T4G (Bipolar)**PACKAGE:** DPAK

| Test | Specification | Condition | Interval | Result |
|-------|------------------------------------|---|-----------|--------|
| HTRB | JESD22-A108 | Ta = 150 °C, bias = 100% of rated V | 1008 hrs | 0/84 |
| HTSL | JESD22-A103 | Ta = 150 °C | 1008 hrs | 0/84 |
| IOL | MIL-STD-750 (M1037) AEC-Q101 | Ta=+25°C, deltaTj=100°C max, Ton = Toff = 2min | 15000 cyc | 0/84 |
| TC | JESD22-A104 | Ta = -65°C to +150°C | 1000 cyc | 0/84 |
| AC | JESD22-A102 | 121°C, 100% RH, 15psig, unbiased | 96 hrs | 0/84 |
| H3TRB | JESD22-A101 | 85°C, 85% RH, bias = 100V max | 1008 hrs | 0/84 |
| PC | J-STD-020 JESD-A113 | MSL 1 @ 260 °C | | 0/336 |
| RSH | JESD22- B106 | Ta = 265°C, 10 sec | | 0/30 |
| SD | JSTD002 | Ta = 245°C, 10 sec | | 0/15 |



QV DEVICE NAME: SURHD8560W1T4G (Ultrafast)

PACKAGE: DPAK

| Test | Specification | Condition | Interval | Result |
|-------|------------------------------------|--|-----------|--------|
| HTRB | JESD22-A108 | Ta = 150°C, Tj(est)= 175°C, bias = 100% of rated V | 1008 hrs | 0/252 |
| HTSL | JESD22-A103 | Ta = 175 °C | 1008 hrs | 0/252 |
| IOL | MIL-STD-750 (M1037) AEC-Q101 | Ta=+25°C, deltaTj=100°C max, Ton = Toff = 2min | 15000 cyc | 0/252 |
| TC | JESD22-A104 | Ta = -65°C to +150°C | 1000 cyc | 0/252 |
| AC | JESD22-A102 | 121°C, 100% RH, 15psig, unbiased | 96 hrs | 0/252 |
| H3TRB | JESD22-A101 | 85°C, 85% RH, bias = 100V max | 1008 hrs | 0/252 |
| PC | J-STD-020 JESD-A113 | MSL 1 @ 260 °C | | 0/1008 |
| RSH | JESD22- B106 | Ta = 265°C, 10 sec | | 0/90 |
| SD | JSTD002 | Ta = 245°C, 10 sec | | 0/45 |

QV DEVICE NAME: NBRD5H100T4G (Schottky)

PACKAGE: DPAK

| Test | Specification | Condition | Interval | Result |
|-------|------------------------------------|---|-----------|--------|
| HTRB | JESD22-A108 | Ta = 90°C, bias = 100% of rated V | 1008 hrs | 0/84 |
| HTSL | JESD22-A103 | Ta = 175 °C | 1008 hrs | 0/84 |
| IOL | MIL-STD-750 (M1037) AEC-Q101 | Ta=+25°C, deltaTj=100°C max, Ton = Toff = 2min | 15000 cyc | 0/84 |
| TC | JESD22-A104 | Ta = -65°C to +150°C | 1000 cyc | 0/84 |
| AC | JESD22-A102 | 121°C, 100% RH, 15psig, unbiased | 96 hrs | 0/84 |
| H3TRB | JESD22-A101 | 85°C, 85% RH, bias = 80% of rated V | 1008 hrs | 0/84 |
| PC | J-STD-020 JESD-A113 | MSL 1 @ 260 °C | | 0/336 |
| RSH | JESD22- B106 | Ta = 265°C, 10 sec | | 0/30 |
| SD | JSTD002 | Ta = 245°C, 10 sec | | 0/15 |

Electrical Characteristic Summary:

Electrical characteristics are not impacted.



List of Affected Standard Parts:

| Part Number | Qualification Vehicle | Part Number | Qualification Vehicle |
|----------------|-----------------------|---------------|-----------------------|
| MBRD1035CTLG | NBRD5H100T4G | MBRD660CTRLG | NBRD5H100T4G |
| MBRD1035CTLT4G | NBRD5H100T4G | MBRD660CTT4G | NBRD5H100T4G |
| MBRD1045T4G | NBRD5H100T4G | MBRD660CTT4H | NBRD5H100T4G |
| MBRD320G | NBRD5H100T4G | MBRD835LG | NBRD5H100T4G |
| MBRD320RLG | NBRD5H100T4G | MBRD835LT4G | NBRD5H100T4G |
| MBRD320RLH | NBRD5H100T4G | MBRD835LT4H | NBRD5H100T4G |
| MBRD320T4G | NBRD5H100T4G | MJD112G | NJVMJD350T4G |
| MBRD320T4H | NBRD5H100T4G | MJD112RLG | NJVMJD350T4G |
| MBRD330G | NBRD5H100T4G | MJD112T4G | NJVMJD350T4G |
| MBRD330RLG | NBRD5H100T4G | MJD117G | NJVMJD350T4G |
| MBRD330T4G | NBRD5H100T4G | MJD117T4G | NJVMJD350T4G |
| MBRD340G | NBRD5H100T4G | MJD122G | NJVMJD350T4G |
| MBRD340RLG | NBRD5H100T4G | MJD122T4G | NJVMJD350T4G |
| MBRD340T4G | NBRD5H100T4G | MJD127G | NJVMJD350T4G |
| MBRD350G | NBRD5H100T4G | MJD127T4G | NJVMJD350T4G |
| MBRD350RLG | NBRD5H100T4G | MJD128T4G | NJVMJD350T4G |
| MBRD350T4G | NBRD5H100T4G | MJD148T4G | NJVMJD350T4G |
| MBRD360G | NBRD5H100T4G | MJD200G | NJVMJD350T4G |
| MBRD360RLG | NBRD5H100T4G | MJD200RLG | NJVMJD350T4G |
| MBRD360T4G | NBRD5H100T4G | MJD200T4G | NJVMJD350T4G |
| MBRD5H100T4G | NBRD5H100T4G | MJD210G | NJVMJD350T4G |
| MBRD620CTT4G | NBRD5H100T4G | MJD210RLG | NJVMJD350T4G |
| MBRD630CTT4G | NBRD5H100T4G | MJD210T4G | NJVMJD350T4G |
| MBRD640CTT4G | NBRD5H100T4G | MJD243G | NJVMJD350T4G |
| MBRD640CTT4H | NBRD5H100T4G | MJD243T4G | NJVMJD350T4G |
| MBRD650CTG | NBRD5H100T4G | MJD253T4G | NJVMJD350T4G |
| MBRD650CTT4G | NBRD5H100T4G | MJD295G | NJVMJD350T4G |
| MBRD660CTG | NBRD5H100T4G | MJD295T4G | NJVMJD350T4G |
| MJD3055T4G | NJVMJD350T4G | MJD47T4G | NJVMJD350T4G |
| MJD31CG | NJVMJD350T4G | MJD50G | NJVMJD350T4G |
| MJD31CRLG | NJVMJD350T4G | MJD50T4G | NJVMJD350T4G |
| MJD31CT4G | NJVMJD350T4G | MJD5731T4G | NJVMJD350T4G |
| MJD31T4G | NJVMJD350T4G | MJD6039T4G | NJVMJD350T4G |
| MJD32CG | NJVMJD350T4G | MSRD620CTG | SURHD8560W1T4G |
| MJD32CRLG | NJVMJD350T4G | MSRD620CTRG | SURHD8560W1T4G |
| MJD32CT4G | NJVMJD350T4G | MSRD620CTT4G | SURHD8560W1T4G |
| MJD32RLG | NJVMJD350T4G | MSRD620CTT4RG | SURHD8560W1T4G |
| MJD32T4G | NJVMJD350T4G | MURD320T4G | SURHD8560W1T4G |
| MJD340G | NJVMJD350T4G | MURD330T4G | SURHD8560W1T4G |
| MJD340RLG | NJVMJD350T4G | MURD340T4G | SURHD8560W1T4G |



| | | | |
|-----------------|---------------|-----------------|----------------|
| MJD340T4G | NJVMJD350T4G | MURD530T4G | SURHD8560W1T4G |
| MJD350T4G | NJVMJD350T4G | MURD550PFT4G | SURHD8560W1T4G |
| MJD41CRLG | NJVMJD350T4G | MURD620CTG | SURHD8560W1T4G |
| MJD41CT4G | NJVMJD350T4G | MURD620CTH | SURHD8560W1T4G |
| MJD42CG | NJVMJD350T4G | MURD620CTT4G | SURHD8560W1T4G |
| MJD42CRLG | NJVMJD350T4G | MURHD560T4G | SURHD8560W1T4G |
| MJD42CT4G | NJVMJD350T4G | MURHD560W1T4G | SURHD8560W1T4G |
| MJD44E3T4G | NJVMJD350T4G | NDD02N60ZT4G | STD110N02RT4G |
| MJD44H11G | NJVMJD350T4G | NDD03N60ZT4G | STD110N02RT4G |
| MJD44H11RLG | NJVMJD350T4G | NDD03N80ZT4G | STD110N02RT4G |
| MJD44H11T4G | NJVMJD350T4G | NDD04N50ZT4G | STD110N02RT4G |
| MJD44H11T5G | NJVMJD350T4G | NDD04N60ZT4G | STD110N02RT4G |
| MJD45H11G | NJVMJD350T4G | NDD05N50ZT4G | STD110N02RT4G |
| MJD45H11RLG | NJVMJD350T4G | NDD60N360U1-35G | STD110N02RT4G |
| MJD45H11T4G | NJVMJD350T4G | NDD60N360U1T4G | STD110N02RT4G |
| MJD47G | NJVMJD350T4G | NDD60N550U1-35G | STD110N02RT4G |
| NDD60N550U1T4G | STD110N02RT4G | NTD4805NT4G | STD110N02RT4G |
| NDD60N745U1-35G | STD110N02RT4G | NTD4806NT4H | STD110N02RT4G |
| NDD60N745U1T4G | STD110N02RT4G | NTD4809N-35H | STD110N02RT4G |
| NDD60N900U1-35G | STD110N02RT4G | NTD4809NAT4H | STD110N02RT4G |
| NDD60N900U1T4G | STD110N02RT4G | NTD4809NT4G | STD110N02RT4G |
| NJD1718T4G | NJVMJD350T4G | NTD4813NHT4G | STD110N02RT4G |
| NJD2873T4G | NJVMJD350T4G | NTD4813NT4H | STD110N02RT4G |
| NJD35N04G | NJVMJD350T4G | NTD4815N-35G | STD110N02RT4G |
| NJD35N04T4G | NJVMJD350T4G | NTD4858N-35G | STD110N02RT4G |
| NSS1C300ET4G | NJVMJD350T4G | NTD4858NT4G | STD110N02RT4G |
| NSS1C301ET4G | NJVMJD350T4G | NTD4860NT4G | STD110N02RT4G |
| NTD110N02RT4G | STD110N02RT4G | NTD4904N-35G | STD110N02RT4G |
| NTD14N03RT4G | STD110N02RT4G | NTD4904NT4G | STD110N02RT4G |
| NTD18N06LT4G | STD110N02RT4G | NTD4909N-35H | STD110N02RT4G |
| NTD20N03L27T4G | STD110N02RT4G | NTD4909NA-35G | STD110N02RT4G |
| NTD20N06LT4G | STD110N02RT4G | NTD4909NA-35H | STD110N02RT4G |
| NTD20N06T4G | STD110N02RT4G | NTD4909NT4G | STD110N02RT4G |
| NTD20P06LT4G | STD110N02RT4G | NTD4909NT4H | STD110N02RT4G |
| NTD24N06LT4G | STD110N02RT4G | NTD4965NT4G | STD110N02RT4G |
| NTD24N06T4G | STD110N02RT4G | NTD4969NT4G | STD110N02RT4G |
| NTD25P03LT4G | STD110N02RT4G | NTD4979N-35G | STD110N02RT4G |
| NTD2955T4G | STD110N02RT4G | NTD5802NT4G | STD110N02RT4G |
| NTD3055-094T4G | STD110N02RT4G | NTD5862NT4G | STD110N02RT4G |
| NTD3055-150T4G | STD110N02RT4G | NTD5865NLT4G | STD110N02RT4G |
| NTD3055L104T4G | STD110N02RT4G | NTD5867NLT4G | STD110N02RT4G |
| NTD3055L170T4G | STD110N02RT4G | NTD6414ANT4G | STD110N02RT4G |
| NTD4302T4G | STD110N02RT4G | NTD6415ANLT4G | STD110N02RT4G |



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|----------------|---------------|---------------|----------------|
| NTD4804NT4G | STD110N02RT4G | NTD6416ANLT4G | STD110N02RT4G |
| NDD60N360U1-1G | STD110N02RT4G | NTD6416ANT4G | STD110N02RT4G |
| NDD60N550U1-1G | STD110N02RT4G | NDDL01N60Z-1G | STD110N02RT4G |
| NDD60N745U1-1G | STD110N02RT4G | NDDL01N60ZT4G | STD110N02RT4G |
| NDD60N900U1-1G | STD110N02RT4G | XDD04N60ZT4G | STD110N02RT4G |
| NTD2955-1G | STD110N02RT4G | NTD4808N-1G | STD110N02RT4G |
| NTD3055L104-1G | STD110N02RT4G | STD4963NT4G | STD110N02RT4G |
| NDD03N40ZT4G | STD110N02RT4G | NTD4970N-35G | STD110N02RT4G |
| NDD02N40-1G | STD110N02RT4G | MJD112-1G | NJVMJD350T4G |
| NDD02N40T4G | STD110N02RT4G | MJD117-1G | NJVMJD350T4G |
| NDD03N40Z-1G | STD110N02RT4G | MJD253-1G | NJVMJD350T4G |
| NDD04N50Z-1G | STD110N02RT4G | MJD42C1G | NJVMJD350T4G |
| NDD02N60Z-1G | STD110N02RT4G | MJD44H11-1G | NJVMJD350T4G |
| NDD03N60Z-1G | STD110N02RT4G | MJD45H11-1G | NJVMJD350T4G |
| NDD03N80Z-1G | STD110N02RT4G | NSI50350ADT4G | NJVMJD350T4G |
| NDD04N60Z-1G | STD110N02RT4G | MJD31C1G | NJVMJD350T4G |
| MBRD640CTG | NBRD5H100T4G | NHPD660T4G | SURHD8560W1T4G |

List of Affected Customer Specific Part:

NOTE: Please be informed that parts impacted by this PDN/PCN are Special/Customer specific parts, thus MPN & CPN info will be available to affected customers only by clicking the "[Custom PCN for Selected Company Button](#)" in the Document Analysis page of PCMS/PCN Alert.