



## **Product Change Notices**

**PCN No.: 20140202**

**Date: February 27, 2014**

**Subject: Add assembly and test house NFME as another source for AME package SOT-223, SOP8(PP), TO-252, (T)SOT-23, (T)SOT-25 and (T)SOT-26**

This is to inform you that NFME assembly and test house will be added as another source for the AME package SOT-223, SOP8(PP), TO-252, (T)SOT-23, (T)SOT-25 and (T)SOT-26 with below conditions:

1. AME ensure this new Assembly house is 100% in compliance with AME product specifications.
2. AME had qualified these two new material packages with reliability test.
3. The Part Number of each product is unchanged, but identification via D/C is available.

This notification is for your information and concurrence.

If you require AME Qual/Rel data or samples to qualify this change, please contact AME, Inc. directly or through AME's authorized Sales Representative or Distributor.

Please note this PCN will be effective 30 days after the issuing date automatically if we do not receive any response, comment or questions from you.

If you have any questions concerning this change, please contact:

### **PCN Originator:**

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The expected 1st affected shipment date is March 27 2014

### **Reason of Change:**

Add another assembly test house is to increase AME Assembly and test capacity.



**Qual/REL Report:**

[PR130810\\_AU2095D\\_AME8801OEEVZ-C\\_SOT-2x](#)

[PR130812\\_AU2013-00\\_AME8815BEGT180Z-C\\_SOT-223](#)

[PR131002\\_A003BB-01\\_AME8865-BZAADJ-C\\_SOP-8/PP](#)

[PR131109\\_A003BB-01\\_AME8865-ACS150-C\\_TO-252](#)

Test Item	Method	Description	Result
HTST	JESD22-A103C	150 , 1000 hrs	<b>Pass</b>
THT (85/85)	JESD22-A101C	85 ,85% RH, 1000hrs, without bias	<b>Pass</b>
PCT	JESD22-A102C	121 , 100% RH, 2atm, 168hrs	<b>Pass</b>
TCT	JESD22-A104D	-65 ~ 150 , 500 cycles, DWELL=15min	<b>Pass</b>
Solderability	J-STD-002C	Steam aging: 8h Temp.=245 , Duration=5sec	<b>Pass</b>



Reliability Report  
for  
NFME package SOT-223 , SOP-8(PP) ,  
TO-252 and (T)SOT-2x

**Approved by**

Arthur Rong  
Quality & Reliability Dept.  
Director

**Prepared by**

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Quality & Reliability Dept.  
Supervisor



## **Conclusion:**

This is to inform you that the new assembly and test house NFME will apply to all the AME's products of SOT-223, SOP8(PP), TO-252, (T)SOT-23, (T)SOT-25 and (T)SOT-26 package.

The SOT-223, SOP8(PP), TO-252, (T)SOT-23, (T)SOT-25 and (T)SOT-26 package build by NFME has successfully met AME's reliability standard that is required on all AME, Inc products.

Further more, QRA Dept. of AME, Inc monitors the reliability continuously to make sure that all SOT-223, SOP8(PP), TO-252, (T)SOT-23, (T)SOT-25 and (T)SOT-26 series product will still meet AME's reliability standard in the future.

## **Table of Contents:**

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### Package Reliability Test Result:

Test Item	Test Condition	Sample Size / Failures	Result
MSL	30/60 192 hours Bake 125 ,24hrs IR-reflow 3 cycles Peak Temp.= 260 IPC/JEDEC J-STD-020D	22 pcs / 0 pcs	Pass
THT	Precondition <sup>NOTE 2</sup> Temp.=85 , R.H.=85% Duration=1000 hours Unbiased, Read at 1000 hours	77 pcs / 0 pcs	Pass
PCT	Precondition <sup>NOTE 2</sup> Temp.=121 , R.H.=100% 2atm, Unbiased Duration=168 hours Read at 168 hours	77 pcs / 0 pcs	Pass
TCT	Precondition <sup>NOTE 2</sup> -65 ~ 150 500 cycles Unbiased, Read at 500 cycles	77 pcs / 0 pcs	Pass
HTS	Precondition <sup>NOTE 2</sup> Temp.=150 Duration=1000 hours Unbiased, Read at 1000 hours	77 pcs / 0 pcs	Pass
Solderability	Temp.=245 Duration=5sec	5 pcs / 0 pcs	Pass

**NOTE 2:** 30/60 192 hours + IR-reflow 3 cycles with Peak Temp.= 260

## IR-reflow Test Result:

Test Item	Test Condition	Sample Size / Failures	Result
IR-reflow	See IR reflow Profile Perform 3 cycles test	22 pcs / 0 pcs	Pass

IR reflow Profile:

Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Average Ramp-Up Rate ( $T_{S_{max}}$ to $T_p$ )	3 /second max.	3 /second max.
<b>Preheat</b>		
- Temperature Min ( $T_{S_{min}}$ )	100	150
- Temperature Max ( $T_{S_{max}}$ )	150	200
- Time ( $t_{S_{min}}$ to $t_{S_{max}}$ )	60~120 seconds	60~180 seconds
<b>Time maintained above</b>		
- Temperature ( $T_L$ )	183	217
- Time ( $t_L$ )	60~150 seconds	60~150 seconds
Peak/Classification Temperature ( $T_p$ )	245	260
Time within 5° of actual Peak Temperature ( $t_p$ )	10~30 seconds	20~40 seconds
Ramp-Down Rate	6 /second max.	6 /second max.
Time 25° to Peak Temperature	6 minutes max.	8 minutes max.

