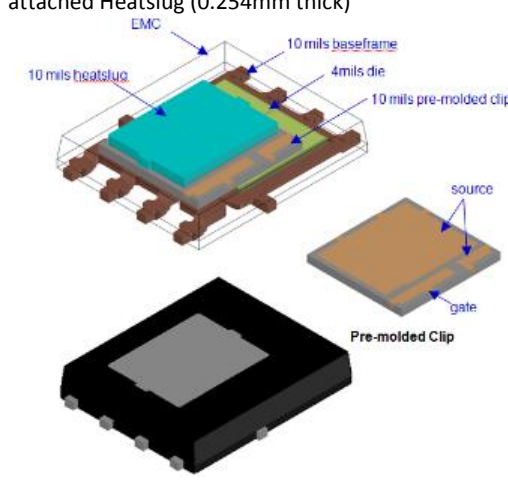
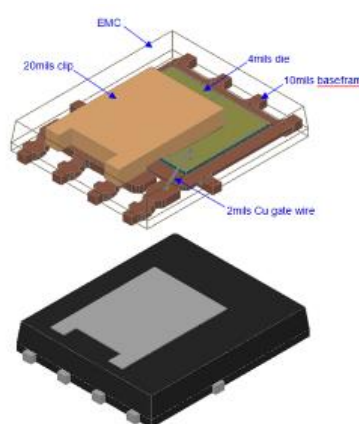


Title of Change:	PQFN_56DC Metal Clip with Cu Gate Wire Conversion	
Proposed first ship date:	27 June 2018	
Contact information:	Contact your local ON Semiconductor Sales Office or <Joseph.Mendoza@onsemi.com>	
Samples:	Contact your local ON Semiconductor Sales Office	
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or <KarenMae.Taping@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:	Affected products will be identified with date code	
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 checked="" type="checkbox"/> Manufacturing Process Change <input type="checkbox"/> Product specific change <input type="checkbox"/> Shipping/Packaging/Marking <input type="checkbox"/> Other: _____	
Sites Affected:	ON Semiconductor Sites: ON Cebu, Philippines	External Foundry/Subcon Sites: None

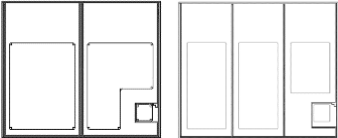
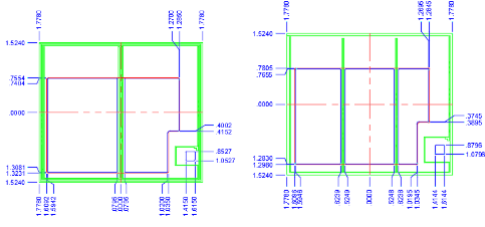
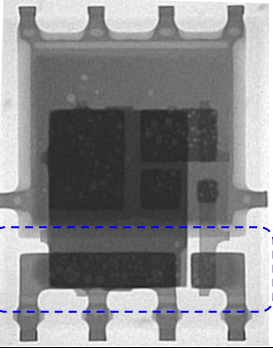
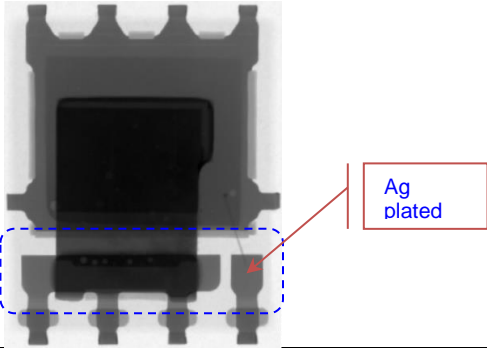
Description and Purpose:

Conversion of PQFN_56DC from using Pre-Molded Clip to Metal Clip with Cu Gate wire to improve Gate leadpost interconnection. The conversion will entail the following assembly process and package dimension changes:

1. Addition of Process steps, i.e., Die Top Print prior Clip bond, Flux Clean prior Wirebond, Wirebond for Gate wire, and Plasma Clean prior Mold.
2. Change in Clip bonding process technology from Pick and Place of Saw Singulated Pre-molded Clip to Pick and Place of Punch Singulated Metal Clip.
3. Reduction in overall package thickness from 0.95-1.05mm to 0.85-0.95mm due to use of single piece Metal Clip.

Material to be changed	Before Change Description	After Change Description
Clipframe/ Heatslug	Pre-molded Clip (0.254mm thick) with solder-attached Heatslug (0.254mm thick) 	Bare Metal Clip (0.508mm thick) with 2mil Cu Gate Wire 



Material to be changed	Before Change Description	After Change Description
<p>Die Solderable Top Metal (STM)</p>	<p>Both Gate and Source pads have TiNiAg STM</p>  <p>Notes: 1. "R" on die item name means both Gate and Source pads have TiNiAg STM.</p>	<p>Only Source pad has TiNiAg STM. No TiNiAg STM on Gate pad for Cu wire bonding purposes</p>  <p>Notes: 1. Blue lines are for polyimide opening. 2. Red lines are for TiNiAg STM outline with 15um overlap on PI. 3. "M" on die item name means no TiNiAg STM on Gate pad.</p>
<p>Leadframe</p>	<p>Leadframe without plating on Gate leadpost Die Attach Pad Dimensions: 4.2x3.5mm Source Leadpost Pad Dimensions: 2.87x0.7mm Gate Leadpost Pad Dimensions: 1.02x0.7mm</p> 	<p>Leadframe with Spot Ag plating on Gate leadpost for Cu wire bonding purposes Die Attach Pad Dimensions: 3.916x3.38mm Source Leadpost Pad Dimensions: 3.64x0.7mm Gate Leadpost Pad Dimensions: 0.6x0.7mm</p> 



Reliability Data Summary:

QV DEVICE NAME: FDMS86101DC

RMS: Q20170045

PACKAGE: PQFN_56DC

Test	Specification	Condition	Interval	Results
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	7500 cyc	0/80
			15000 cyc	0/80
TC	JESD22-A104	Ta= -65°C to +150°C	100 cyc	0/80
			500 cyc	0/80
			1000 cyc	0/80
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/80
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/80

QV DEVICE NAME: FDMS86300DC

RMS: Q20170045

PACKAGE: PQFN_56DC

Test	Specification	Condition	Interval	Results
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	7500 cyc	0/80
			15000 cyc	0/80
TC	JESD22-A104	Ta= -65°C to +150°C	100 cyc	0/80
			500 cyc	0/80
			1000 cyc	0/80
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/80
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/80

Electrical Characteristic Summary:

Electrical characteristics are not impacted.

List of Affected Standard Parts:

Part Number	Qualification Vehicle
FDMS86101DC	FDMS86101DC
FDMS86300DC	FDMS86300DC
FDMS8320LDC	FDMS86300DC
FDMS86500DC	FDMS86300DC
FDMS7650DC	FDMS86101DC
FDMS86200DC	FDMS86101DC



Appendix A: Changed Products

Product	Customer Part Number	Qualification Vehicle
FDMS7650DC		FDMS86101DC
FDMS8320LDC		FDMS86300DC
FDMS86101DC		FDMS86101DC
FDMS86200DC		FDMS86101DC
FDMS86300DC		FDMS86300DC
FDMS86500DC		FDMS86300DC