

Automotive Discrete Group (ADG)
Power Transistor Division
LV and HV Business Unit

Process Change Notification

**TO-220 Plating Process Capacity Extension - Dongguan Syundai (China)
INDUSTRIAL**

Dear Customer,

Following the continuous improvement of our service and in order to increase TO-220 capacity, deflash and plating processes for IGBTs, Power MOSFET and Power BIPOLAR Transistors, will also become outsourced from ST Shenzhen (China) Assembly Plant to our subcontractor Dongguan Syundai (China).

Products manufactured in Dongguan Syundai (China), guarantees the same quality and electrical characteristics as per current production.

The involved products series and affected packages are listed in the table below:

INDUSTRIAL Product Family	Package	Part Number
IGBTs Power MOSFET - LV Power MOSFET - HV Power BIPOLAR Transistors	TO-220	See involved product list

Any other Product related to the above series, even if not expressly included or partially mentioned in the attached table, is affected by this change.

Qualification program and results availability:

TO-220 Whisker Results is provided in attachment to this document.

Samples availability:

Samples of the test vehicle devices will be available on request starting from week 50-2018. Any other sample request will be processed and scheduled by Power Transistor Division upon request.

Product Family	Package	Part Number - Test Vehicle
IGBT Power MOSFET Transistors	TO-220	STGP3HF60HD STP100N6F7

Change implementation schedule:

The production start and first shipments will be implemented after week 10 of 2019.

Marking and traceability:

Unless otherwise stated by customer specific requirement, traceability of Products manufactured in Dongguan Syundai (China), will be ensured by Q.A. number.

Yours faithfully.

STGP3HF60HD Whisker Results

FRAME TO-220 Mon Cu OpH/N 20u BARE COPPER

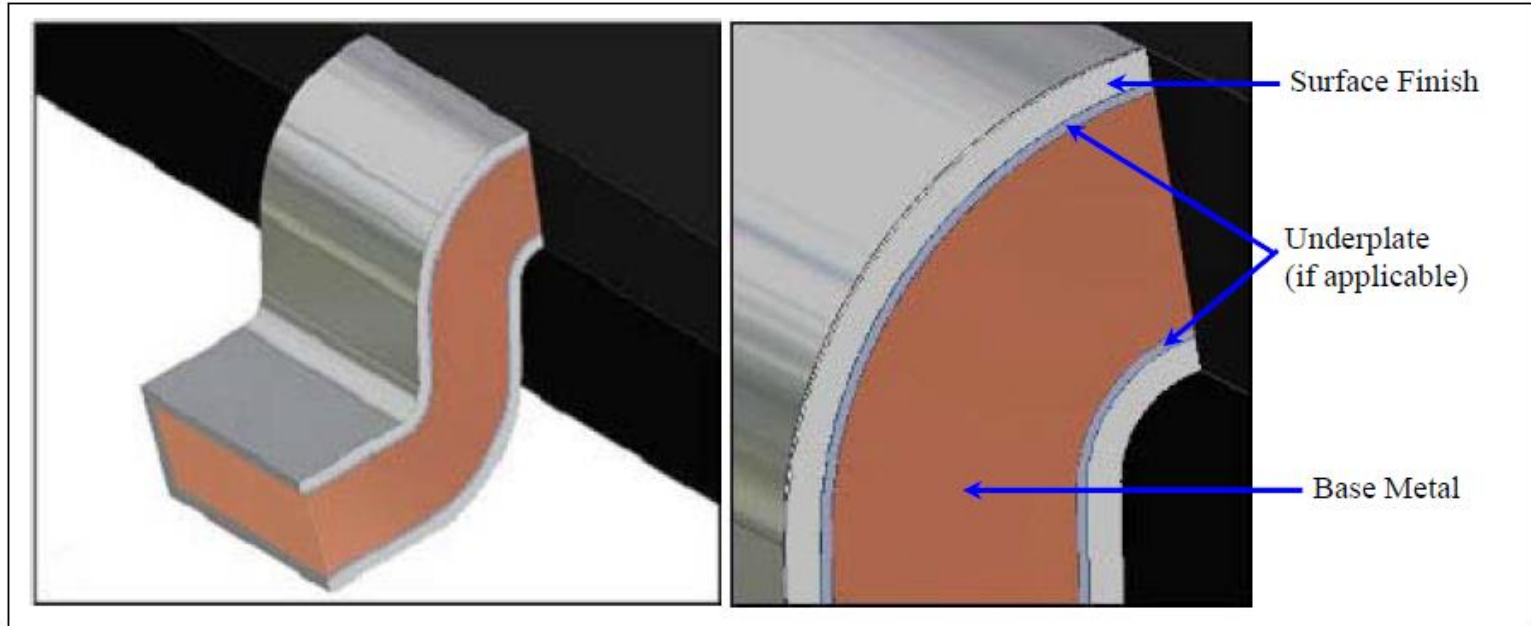
PACKAGE	TEST ITEM	TEST CONDITION	RESULT		
			STGP3HF60HD		
			GK8130XB01	GK8130XB02	GK8130XBRR
TO-220	ROOM T&H	30°C / 60%RH @1000hrs	0/5 Positive	0/5 Positive	0/5 Positive
		30°C / 60%RH @2000hrs	0/5 Positive	0/5 Positive	0/5 Positive
		30°C / 60%RH @3000hrs	0/5 Positive	0/5 Positive	0/5 Positive
	PC+THS	SnPb Reflow + THS: 55°C / 85%RH @1000hrs	0/5 Positive	0/5 Positive	0/5 Positive
		SnPb Reflow + THS: 55°C / 85%RH @2000hrs	0/5 Positive	0/5 Positive	0/5 Positive
		SnPb Reflow + THS: 55°C / 85%RH @3000hrs	0/5 Positive	0/5 Positive	0/5 Positive
		Pb-Free Reflow + THS: 55°C / 85RH @1000hrs	0/5 Positive	0/5 Positive	0/5 Positive
		Pb-Free Reflow + THS: 55°C / 85RH @2000hrs	0/5 Positive	0/5 Positive	0/5 Positive
		Pb-Free Reflow + THS: 55°C / 85RH @3000hrs	0/5 Positive	0/5 Positive	0/5 Positive
	PC+TC	SnPb Reflow + TC: -40/85d @500c	0/5 Positive	0/5 Positive	0/5 Positive
		SnPb Reflow + TC: -40/85d @1000c	0/5 Positive	0/5 Positive	0/5 Positive
		SnPb Reflow + TC: -40/85d @1500c	0/5 Positive	0/5 Positive	0/5 Positive
		Pb-Free Reflow + TC: -40/85d @500c	0/5 Positive	0/5 Positive	0/5 Positive
		Pb-Free Reflow + TC: -40/85d @1000c	0/5 Positive	0/5 Positive	0/5 Positive

STP100N6F7 Whisker Results

FRAME TO-220 Mon Ve1 OpD/H/L 20u PINi/NiP

PACKAGE	TEST ITEM	TEST CONDITION	RESULT		
			STP100N6F7		
			GK8130V301	GK8130V3RR	GK8130V3RQ
TO-220	ROOM T&H	30°C / 60%RH @1000hrs	0/5 Positive	0/5 Positive	0/5 Positive
		30°C / 60%RH @2000hrs	0/5 Positive	0/5 Positive	0/5 Positive
		30°C / 60%RH @3000hrs	0/5 Positive	0/5 Positive	0/5 Positive
	PC+THS	THS: 55°C / 85%RH @1000hrs	0/5 Positive	0/5 Positive	0/5 Positive
		THS: 55°C / 85%RH @2000hrs	0/5 Positive	0/5 Positive	0/5 Positive
		THS: 55°C / 85%RH @3000hrs	0/5 Positive	0/5 Positive	0/5 Positive
		Pb-Free Reflow + THS: 55°C / 85RH @1000hrs	0/5 Positive	0/5 Positive	0/5 Positive
		Pb-Free Reflow + THS: 55°C / 85RH @2000hrs	0/5 Positive	0/5 Positive	0/5 Positive
		Pb-Free Reflow + THS: 55°C / 85RH @3000hrs	0/5 Positive	0/5 Positive	0/5 Positive
	PC+TC	TC: -40/85d @500c	0/5 Positive	0/5 Positive	0/5 Positive
		TC: -40/85d @1000c	0/5 Positive	0/5 Positive	0/5 Positive
		TC: -40/85d @1500c	0/5 Positive	0/5 Positive	0/5 Positive
		Pb-Free Reflow + TC: -40/85d @500c	0/5 Positive	0/5 Positive	0/5 Positive
		Pb-Free Reflow + TC: -40/85d @1000c	0/5 Positive	0/5 Positive	0/5 Positive
		Pb-Free Reflow + TC: -40/85d @1500c	0/5 Positive	0/5 Positive	0/5 Positive

Component Surface Finishes



Cross-sectional View of Component Surface Finishes