

Product Change Notice

Doc. No.: RF-008-0002
Revision: E

PCN-200917-04

**C19_070_8 inch BSI products change from laser anneal process
to High-K process _OV05640**

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Product Change Notice

PCN Number	200917-04	PCN Date	Jan-11, 2021	Effective Date	April-11, 2021
PCN Revision	0				
Title	TSMC 8 inch BSI products change from laser anneal process to High-K process				
Customer Contact	OV05640 customers				
Proposed Ship Date	2/21/2021			Sample Available date	available

PCN Details	
Description of Change	
<ul style="list-style-type: none"> - TSMC 8 inch BSI products to change from Laser anneal process to High-K process. - TSMC will phase out 8 inch laser anneal tool due to tool vendor end of service. - Current Part# OV05640-xxxx-1A, New Part# OV05640-xxxx-1B (with High-K) 	
Reason for Change	
Laser tool phase out at TSMC	
Product Affected	OV05640-xxxx-xx.
Addition Information	
8 inch BSI products from Laser to High-K_OV05640_Summary (PCN_01082021)	

Notes: Customer should acknowledge receipt of PCN within 30 days. Lack of acknowledgement within 30 days constitutes change acceptance.

Laser anneal to High-K process change_Summary OV5640

OVT

January 8, 2021

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Description:

- TSMC 8 inch BSI products change from Laser anneal process to High-K process.
- TSMC will phase out 8 inch laser anneal tool due to vendor end of service.
- Current Part# OV05640-xxxx-1A, New Part# OV05640-xxxx-1B (with High-K)

Qualify Plan and schedule:

- Reliability Qualification. (completed by Feb, 2021)

Product Affected:

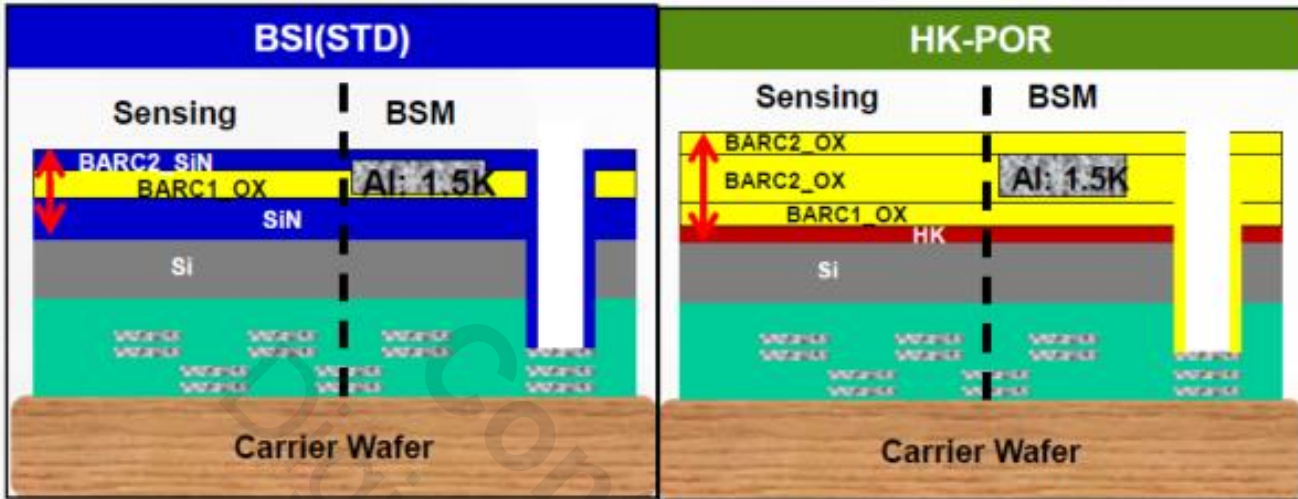
- OV05640-xxxx-xx.

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What is changing?

- TSMC 8 inch BSI products to change from 'Laser anneal' process to 'High-K' process.
- TSMC will phase out 8" inch laser anneal tool due to tool vendor end of service.

Process change details



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Performance Summary

High-K over Laser anneal process (see page below for data)

- Better White Pixel performance
- Dark Current and Color shading (ratio) are comparable
- Parameters such as Color Ratio, image mean were shifted

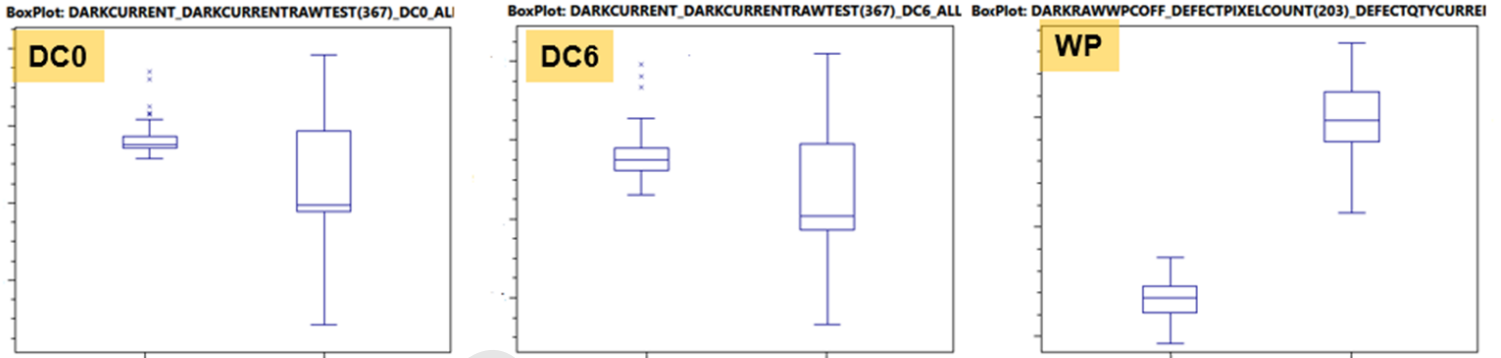
Summary

- OVT recommends that customers work with AE to fine tune the ISP when needed
- Customer high-K material samples are available

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Dark current, White pixel

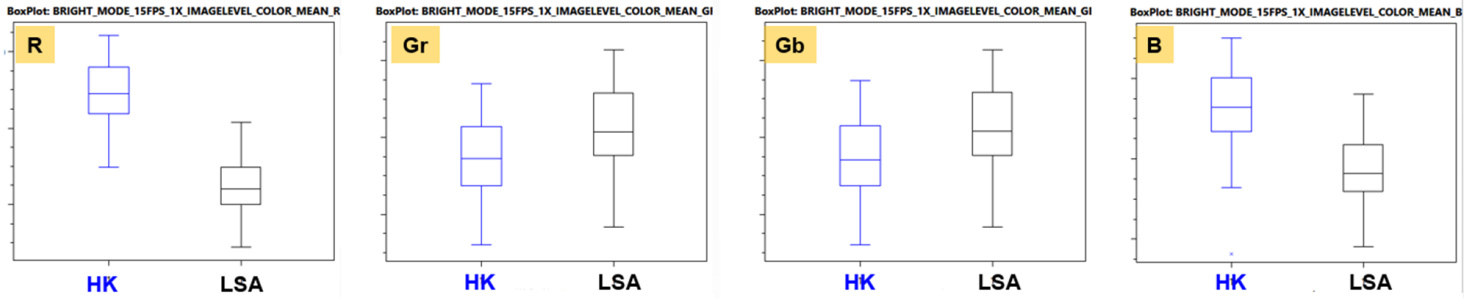
- DC of High-K material are comparable with the laser anneal process
- WP of High-K material are better than the laser anneal process.



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Image level mean

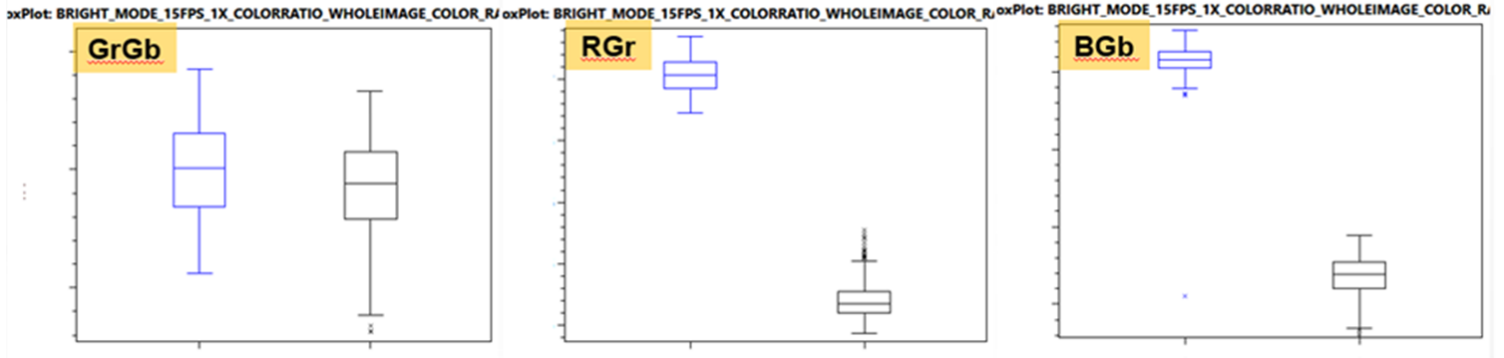
- R, B image level mean of High-K material are higher (~15%) than Laser anneal process.
- Gr, Gb image level mean of High-K material are lower (~2%) than Laser anneal process.



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Color Ratio

- GrGb color ratio of high-K material are comparable to Laser anneal process.
- RGr, BGb color ratio of high-K material are higher (~15%) than Laser anneal process.



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Color Shading

- Color shading (ratio) of high-K material are comparable with Laser anneal process.

