

Automotive Process Change Notification

Date: September 26, 2014

PCN Reference: AU-14-168, D-Pak Leadframe and Bill of Materials (BOM)

Product Reference: Automotive Planar Gen5.x and 7.x MOSFETs in D-Pak packages, IR Mexico Assembly Site

To Our Valued Customer:

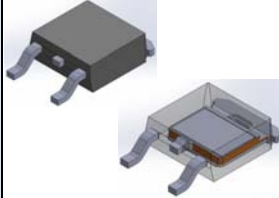
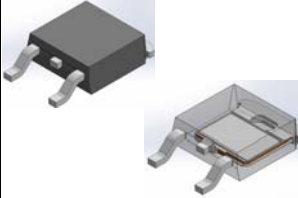
We thank you for your use of International Rectifier (IR) semiconductor products. Our commitment to customer satisfaction and continuous improvement is demonstrated by our change plans to enhance capacity, quality and reliability. We would like to express our sincere appreciation for your cooperation regarding the following changes, and IR will work closely with you to support your requirements during this transition.

Type of Change Notification:

- Leadframe base material
- Plating material
- Die attach material (specific parts only - see table)
- Mold compound material (specific parts only - see table)
- Assembly process flow / lead appearance
- Top protective layer material (AUX and 94-2222 parts only - see table)

Description of Change:

The leadframe will change from a single row dual gauge thickness with selective Ni plating (excluding the die attach area), to a matrix single gauge thickness with selective Ni plating (T-post area only). The backend process flow will change from Trim – Plating - Leadform / Singulation to Plating - Trim / Form / Singulation.

	CURRENT BOM: Dpak SR DG + Current Solder	OPTION 2: DpakM SG Sel Ni t-post + 95.5C3 Solder
Visual Description		
Leadframe	0.035" on heatsink thickness 0.020" on leads thickness Sel Nickel plated except diepad 30 units per LF	0.020" on heatsink thickness 0.020" on leads thickness Sel Nickel except t-post 4 rows, 112 unit per LF

A passivation layer will be added to those parts without a protective top layer.

Reason for the Change:

Material standardization, reduced scrap, and improved solderability. Adding passivation will improve robustness and reliability.

Effective Date:

March 26, 2015

Impact of Change:

No changes to form, fit, or function. Datasheet specifications will not be changed. The location for assembly and final test will not change.

Products Affected:

PN	CHANGE	FROM IRMX QUERY_DIE ATTACH	TO IRMX QUERY_DIE ATTACH	FROM IRMX QUERY_MC	TO IRMX QUERY_MC
64-4027PBF	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 40X60	RM,MC CEL9240HF10L8 16X8
64-4050PBF	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 40X60	RM,MC CEL9240HF10L8 16X8
64-4073PBF	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 40X60	RM,MC CEL9240HF10L8 16X8
64-4111PBF	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 16X8.5	RM,MC CEL9240HF10L8 16X8
64-4113PBF	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 40X60	RM,MC CEL9240HF10L8 16X8
64-4116PBF	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 40X60	RM,MC CEL9240HF10L8 16X8
64-4119PBF	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 40X60	RM,MC CEL9240HF10L8 16X8
64-4120PBF	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 40X60	RM,MC CEL9240HF10L8 16X8
64-4126PBF	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 40X60	RM,MC CEL9240HF10L8 16X8
94-2115	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 40X60	RM,MC CEL9240HF10L8 16X8
94-2137	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 16X8.5	RM,MC CEL9240HF10L8 16X8

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94-2138	Change LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC KMC2110G-7S 16X8.6	NO CHANGE
94-2138PBF	Change LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC KMC2110G 40X60	NO CHANGE
94-2207	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 16X8.5	RM,MC CEL9240HF10L8 16X8
94-2222	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 40X60	RM,MC CEL9240HF10L8 16X8
94-2300	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 40X60	RM,MC CEL9240HF10L8 16X8
94-2300PBF	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 40X60	RM,MC CEL9240HF10L8 16X8
94-2302	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 40X60	RM,MC CEL9240HF10L8 16X8
94-2335	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 40X60	RM,MC CEL9240HF10L8 16X8
94-2336	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 40X60	RM,MC CEL9240HF10L8 16X8
94-2436	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 40X60	RM,MC CEL9240HF10L8 16X8
94-2436PBF	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 40X60	RM,MC CEL9240HF10L8 16X8
94-4007	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 40X60	RM,MC CEL9240HF10L8 16X8
94-4091	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 16X8.5	RM,MC CEL9240HF10L8 16X8
94-4103	Change LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC KMC2110G 40X60	NO CHANGE
94-4104	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 16X8.5	RM,MC CEL9240HF10L8 16X8
94-4157	Change LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC KMC2110G-7S 16X8.6	NO CHANGE
94-4157PBF	Change LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC KMC2110G-7S 16X8.6	NO CHANGE
94-4345PBF	Change LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC KMC2110G-7S 16X8.6	NO CHANGE
94-4591PBF	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 40X60	RM,MC CEL9240HF10L8 16X8
94-4737	Change MC & LF & Die Attach	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 40X60	RM,MC CEL9240HF10L8 16X8
AUIRFR3504	Change MC & LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G-7S 16X8.6	RM,MC CEL9240HF10L8 16X8

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AUIRFR3504TRL	Change MC & LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	RM,MC CEL9240HF10L8 16X8
AUIRFR4105	Change MC & LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G 40X60	RM,MC CEL9240HF10L8 16X8
AUIRFR4105TRL	Change MC & LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	RM,MC CEL9240HF10L8 16X8
AUIRFR5305	Change LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	NO CHANGE
AUIRFR5305TR	Change LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	NO CHANGE
AUIRFR5305TRL	Change LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	NO CHANGE
AUIRFR5410	Change LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	NO CHANGE
AUIRFR5410TRL	Change LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	NO CHANGE
AUIRFR5505	Change LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	NO CHANGE
AUIRFR5505TRL	Change LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	NO CHANGE
AUIRFR6215	Change LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G 40X60	NO CHANGE
AUIRFR6215TR	Change LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	NO CHANGE
AUIRFR6215TRL	Change LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	NO CHANGE
AUIRFR9024N	Change LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	NO CHANGE
AUIRLR2703TRL	Change MC & LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	RM,MC CEL9240HF10L8 16X8
AUIRLR2905	Change MC & LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	RM,MC CEL9240HF10L8 16X8
AUIRLR2905TRL	Change MC & LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	RM,MC CEL9240HF10L8 16X8
AUIRLR2908	Change MC & LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	RM,MC CEL9240HF10L8 16X8
AUIRLR2908TRL	Change MC & LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	RM,MC CEL9240HF10L8 16X8
AUIRLR3105	Change MC & LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	RM,MC CEL9240HF10L8 16X8
AUIRLR3105TRL	Change MC & LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G 40X60	RM,MC CEL9240HF10L8 16X8

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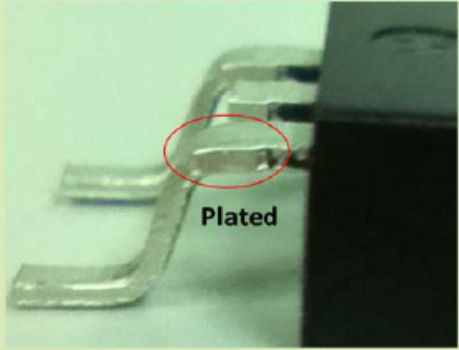
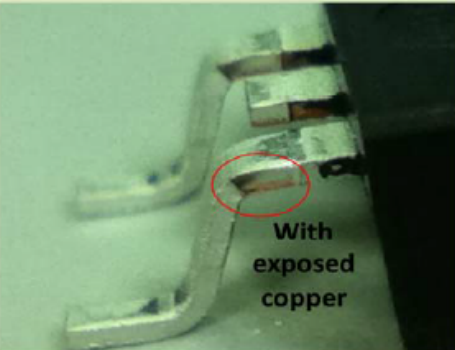
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AUIRLR3410	Change MC & LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G 40X60	RM,MC CEL9240HF10L8 16X8
AUIRLR3410TR	Change MC & LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	RM,MC CEL9240HF10L8 16X8
AUIRLR3410TRL	Change MC & LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	RM,MC CEL9240HF10L8 16X8
AUIRLR3714	Change MC & LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	RM,MC CEL9240HF10L8 16X8
AUIRLR3714TRL	Change MC & LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	RM,MC CEL9240HF10L8 16X8
AUIRLR3915	Change MC & LF	RM,SOLDER 30ML PBSN2AG2.5	NO CHANGE	RM,MC KMC2110G- 7S 16X8.6	RM,MC CEL9240HF10L8 16X8
AUXCLFR5305	Change LF & Die Attach & Passivation	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC KMC2110G- 7S 16X8.6	NO CHANGE
AUXCLFR5410	Change LF & Die Attach & Passivation	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC KMC2110G- 7S 16X8.6	NO CHANGE
AUXCLFR6215TR	Change LF & Die Attach & Passivation	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC KMC2110G 40X60	NO CHANGE
AUXCLFR9024N	Change LF & Die Attach & Passivation	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC KMC2110G 40X60	NO CHANGE
AUXHAFR6215	Change LF & Die Attach & Passivation	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC KMC2110G 40X60	NO CHANGE
AUXTALR3915	Change MC & LF & Die Attach & Passivation Change LF & Die Attach & Passivation	RM,SOLDER 97%PB/3%AG WIR	RM, SOLDER 95.5PB, 2SN, 5AG SSD-C3	RM,MC 6600DG 40X60	RM,MC CEL9240HF10L8 16X8

Method of Identifying Changed Product:

A date code transition for the change will be made available for lot identification.

Parts manufactured with the new backend flow will show bare copper where the dambar was removed:

Current Process flow	Propose Process Flow	Differences
 <p>Plated</p>	 <p>With exposed copper</p>	<p>Exposed copper after dambar cut on Trim/Form/Singulation Integration. This condition is similar on lead cut and heatsink cut on the current process flow.</p>

Qualification and Supporting Data Availability:

Supporting data as requested will be sent separately.

Sample Availability:

Available now.

Contact Information:

CONTACT	NAME	PHONE	EMAIL
Automotive PCN Manager	Scott Daniels	+1 951 375 4531	sdaniel1@irf.com