

Cree® Product Change Notification

| Customer Name: | XXXXXXXXXXXXXX | PCN Reference Number: | CREE-PCN-1049 | |
|-------------------|-----------------|-----------------------|---------------|--|
| Customer Contact: | XXXXXXXXXXXXXX | Date Issued: | XX/XX/20XX | |
| Customer E-Mail: | | | | |
| Address: | Address 1 | | | |
| | Address 2 | | | |
| | City, State Zip | | | |
| | Country | | | |

Please be advised that Cree has qualified a Major Change to a selection of GaN RF devices and that we will begin shipping the affected product with the change as early as 30 days after the PCN Issue Date.

Please review the additional PCN information below.

Affected Product

Table 1 provides a list of products affected by this Major change:

Table 1 Affected Products List

| Cree Part Number | Cree Part Number | Cree Part Number | Cree Part Number |
|------------------|------------------|------------------|------------------|
| CGH21120F | CGHV31500F | CGHV59350F | CMPA2560025F |
| CGH25120F | CGHV35150F | CGHV96050F1 | CMPA5259025F |
| CGHV141K0F | CGHV35150P | CGHV96050F2 | CMPA5259050F |
| CGHV14250F | CGHV35400F | CGHV96100F2 | CMPA5585025F |
| CGHV14500F | CGHV37400F | CGHV96130F | CMPA5585030F |
| CGHV14800F | CGHV50200F | CMPA0060002F | CMPA601C025F |
| CG2H40120F | CG2H40025P | CMPA0060025F | CMPA801B025F |
| CG2H40010P | | | |

Description of the Change

In March of 2018, Cree announced the acquisition of Infineon's RF Power business. This acquisition included manufacturing facilities. The main facility is in Morgan Hill (MGH), California which includes packaging and test operations for LDMOS and GaN-on-SiC RF components.

Cree intends to begin the use of Morgan Hill as an alternate manufacturing site for our RF components. Cree's Research Triangle Park (RTP) manufacturing site will also continue packaging and test operations.

The appearance of the devices manufactured in Morgan Hill will look different, only in the lid marking and lot number format.

© 2019 Cree, Inc. All rights reserved. The information in this document is subject to change without notice. Cree[®], the Cree logo and XLamp[®] are registered trademarks of Cree, Inc.



| Cree RTP Lid Marking | | | Cree MGH Lid Marking | | | | |
|--|--------------------------------------|---|--|--------------------|-------------------------|----------------------|--------------------|
| | CREE () GH40120F C12345S | | | C R CGHA M90 | EE¢ 0120F 1234 Y7 | | |
| Manufacturing Location (C) Cree NC | Sequential Assembly Lot Number | Manufacturing Build Type (S) Standard | Manufacturing Location (M) Morgan Hill | Year (2018) | Calendar Week | Sequential Number | Device Revision |

Fabrication of the semiconductor die will not change. GaN-on-SiC die will continue to be fabricated on the Cree campus in North Carolina. The affected RF components are listed in table 1.

The following parameters will see no change:

- 1. Product's Bill of Materials
- 2. DC and RF parameters
- 3. Data sheet specifications
- 4. Certificates of Compliance

Labels from the Cree Morgan Hill factory are slightly different than Cree RTP labels. Below are examples of Shipping Container Label (Figure 1) and the individual tray or reel label (Figure 2).

Shipping Container Label (Figure 1)

(1T) is the Master Ship Lot (MSL). This lot number is for the shipment. A shipment can contain many sub-lots (Figure 2) for product inside the container.

The MSL format is MSLnnnnnYY

nnnnn is the sequential number

YY is Year, last 2 digits

(1P) is the Product Part Number

- (9D) is the Date Code YYMM
- (Q) is the Quantity of parts inside the container.





Figure 1 – Label on the exterior of the shipping container

Individual Tray or Reel Label (Figure 2)

Tray and Reel labels (Figure 2) include a bar code. The bar code is in the format : %\$<part>\$<lot>\$Q<qty\$%. For the example label below, the read-out is %\$CGH40025F\$M1923499\$Q34\$%

| Part CG | H40025F |
|---------|---------|
| | |
| Lot: | Qty: |
| M192349 | 9 34 |

Figure 2 – Label on the individually bagged trays or reels.

Reason for the Change

This letter is to inform you that Cree will establish an alternate assembly and test facility for its RF components.

Change Impact on Form, Fit, Function, or Reliability

The device markings, shipping containers and shipping labels will change as indicated above.



Key Dates

Table 2 provides estimated dates for Key PCN Milestones based on information available at the date the PCN was issued. Any updates to theses dates can be provided by the Cree contact listed in Table 3.

| Table | 2 | Кеу | PCN | Estimated | Dates |
|-------|---|-----|-----|-----------|-------|
|-------|---|-----|-----|-----------|-------|

| Qualification Report Availability | 2020 |
|-----------------------------------|-------------------------------------|
| Sample Availability | Beginning 4/1/2020 |
| Proposed First Ship Date | Beginning 4/1/2020 |
| Last Date of Unchanged Product | N/A since this is an alternate site |

Cree Contact Information

If you have any questions regarding this Major PCN please contact:

Table 3 PCN Contact

| Cree Contact: | Ryan Baker | |
|--------------------------|----------------------|--|
| Cree Contact E-Mail: | Ryan_Baker@cree.com | |
| Cree Contact Phone: | 919.407.7816 | |
| Cree Contact Fax Number: | N/A | |
| Address: | 4600 Silicon Drive | |
| | Durham NC, 27703 USA | |