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April 3<sup>rd</sup>, 2015,

RE: PCN # EPC51-01 – IGBT Module D and S Package Change

To our valued customers,

Littelfuse would like to notify you of two new changes for IGBT module on D and S packaged products. The new packages are fully approved internally. There are no changes to fit, form, and function of D packaged products, and a minor configuration change on S packaged products with no fit and function impact. Please see the attached documentation for change details and affected part numbers.

Qualification efforts are complete and new packaged products will be available in 2-3 months per standard leadtime. In the meantime limited stock of existing D and S packaged products are available for immediate shipments.

**Form, fit, function changes:** Minor configuration change on S package (reference PCN report for details)

**Part number changes:** None

**Effective date:** April 3<sup>rd</sup>, 2015

**Replacement products:** N/A

**Last time buy:** Limited stock. Please contact factory.

This notification is for your information and acknowledgement. If you have any other questions or concerns, please contact your local sales team or Daisy Wang, Product Manager.

We value your business and look forward to assisting you whenever possible.

Best Regards,

Daisy Wang  
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# PCN Report

## ETR # Various

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**Prepared By:** Orware Liu-Product Engineer,

**Date** : 03/27/2015

**Device** : IGBT Module D and S package Products

**Revision** : A

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### 1.0 Objective:

For D package:

- Package change from separated housing into integrated housing.

For S package:

- Package change from separated housing into integrated housing.
- Terminals direction adjustment.
- Location and distance of mounting holes are kept identical to make no difference of installation for customers.

### 2.0 Applicable Devices:

D package products:

Part Numbers	Package
MG06400D-BN1MM	D
MG06400D-BN4MM	
MG12300D-BN3MM	
MG12300D-BN2MM	
MG06300D-BN4MM	
MG12100D-BA1MM	
MG12150D-BA1MM	
MG12200D-BA1MM	
MG12200D-BN2MM	
MG12300D-BA1MM	
MG12400D-BN2MM	
MG17100D-BN4MM	
MG17150D-BN4MM	
MG17200D-BN4MM	
MG17300D-BN4MM	



S package products:

Part Numbers	Package
MG0675S-BN4MM	S
MG06100S-BR1MM	
MG06100S-BN4MM	
MG06150S-BN4MM	
MG06200S-BN4MM	
MG1250S-BA1MM	
MG1275S-BA1MM	
MG12105S-BA1MM	
MG12100S-BN2MM	
MG12150S-BN2MM	
MG1750S-BN4MM	
MG1775S-BN4MM	
MG17100S-BN4MM	

### **3.0 Assembly, Process & Material Differences/Changes:**

#### 3.1 Assembly and Process Changes:

There are no changes in the assembly and process method.

#### 3.2 Material Changes:

There are no changes in module materials.

### **4.0 Packing Method:**

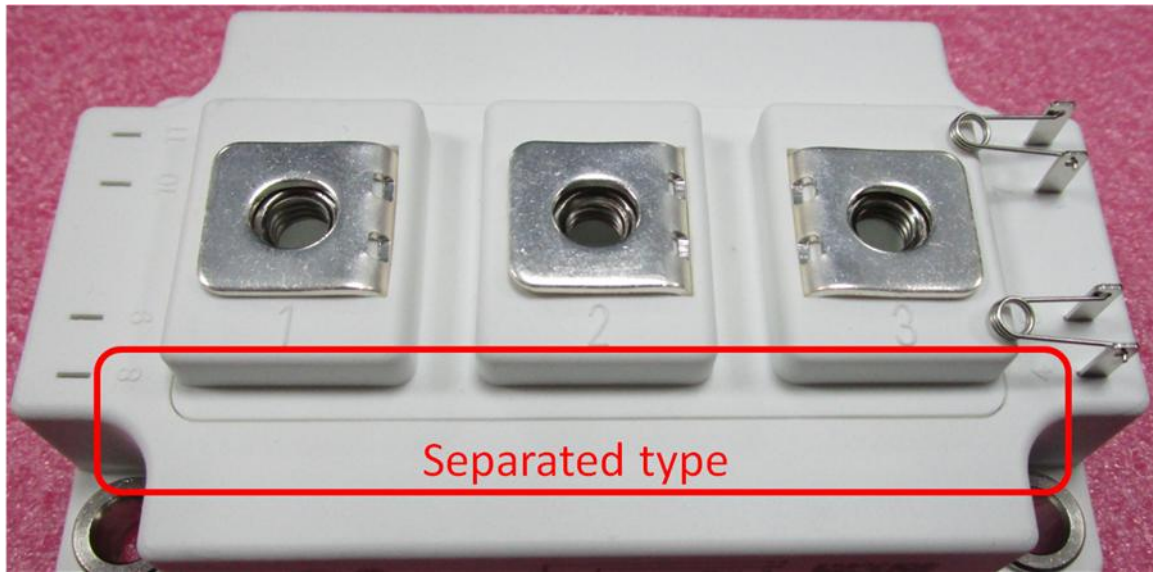
There are no changes in the packing method.

### **5.0 Physical Differences/Changes:**

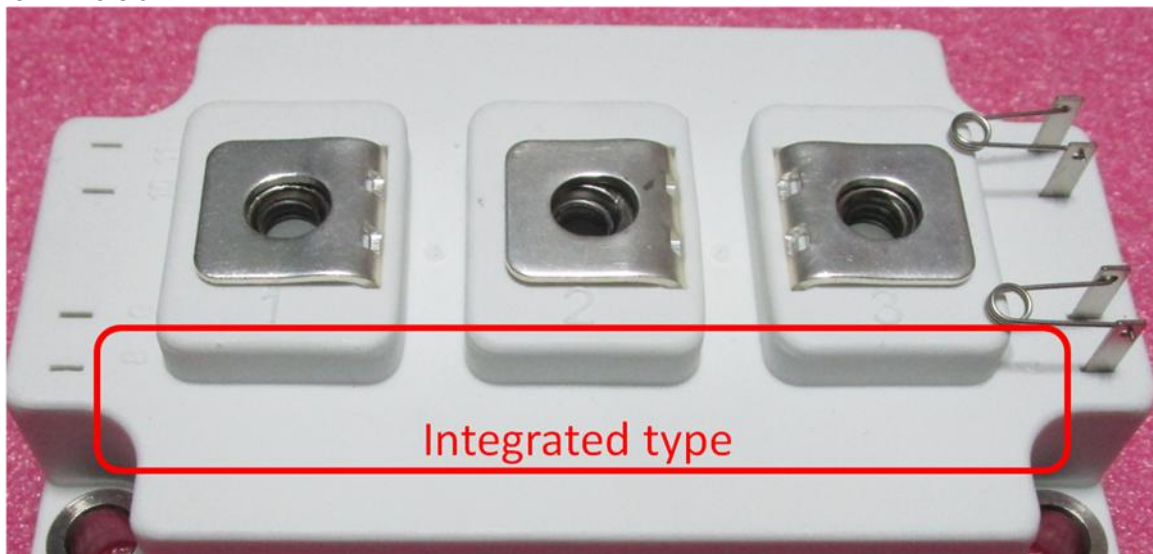
For D package products:

The module housing is changed to integrated mounting without any change on mechanical specification or package outline dimension (POD), pictures as below for reference.

Old D version:



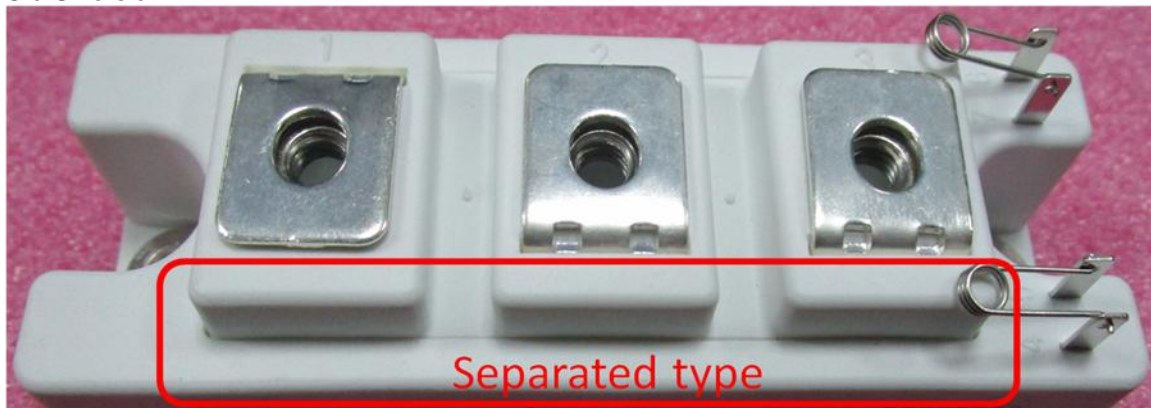
New D version:



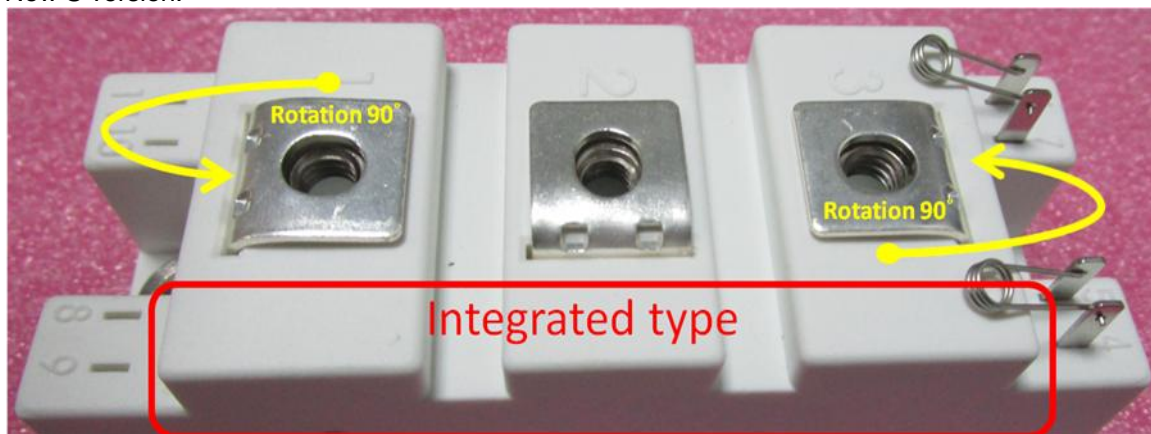
For S package products:

The module housing is changed to integrated mounting and there is a direction adjustment of terminals '#1' and '#3' but without any change on mechanical specification or package outline dimension (POD), pictures as below for reference.

Old S version:



New S version:



## 6.0 Reliability Test Results Summary:

Test Items	Condition	S/S	Results
Temperature Cycle	Ta = -55°C to +150°C	5	All Passed
	Duration = 100 Cycles		
Power Cycling	$\Delta T_j = 100^\circ\text{C}$ · $T_{j\text{max}} < 150^\circ\text{C}$	5	All Passed
	30000 Cycles		
	Ton= 5 sec · Toff= 5 sec		

## 7.0 Electrical Characteristic Summary:

There is no change in electrical characteristics.

## 8.0 Changed Part Identification:

There is no change in the packing method.



## **9.0 Recommendations & Conclusions:**

That determined assembly is qualified and certified for production of Littelfuse IGBT module D & S package products.

## **10.0 Approvals:**

**Jordan Hsieh**  
Product Engineering Manager  
Littelfuse, Hsinchu