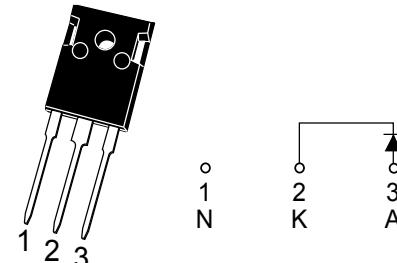


■ Features

- High surge current capability
- No reverse recovery
- Positive Temperature Coefficient
- Easy to paralleling
- Halogen-free / RoHS compliant
- Compliance with EU REACH

V_{RRM}	650V
I_F	15A($T_c=155^\circ C$)
Q_C	30nC



Package:TO-247AB

ECR1565NPT-HF

HF=Halogen Free

■ Applications

- Solar inverter
- Power factor correction
- Data Center
- Switch mode power supply

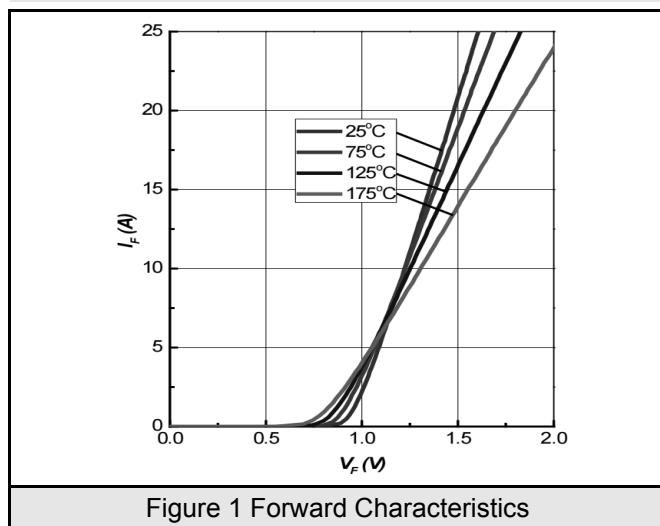
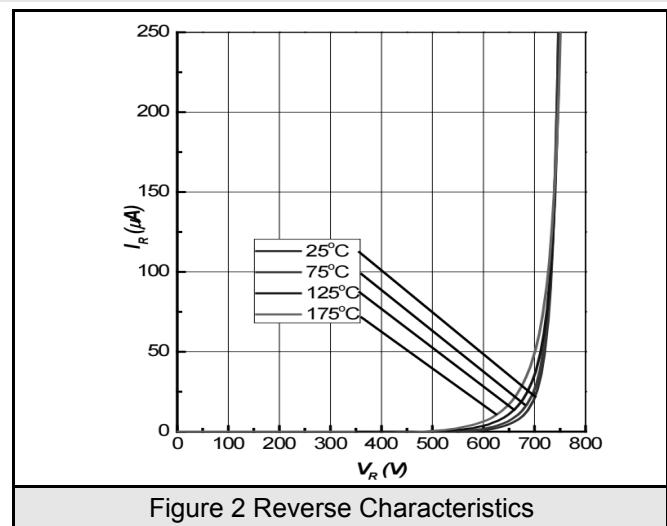
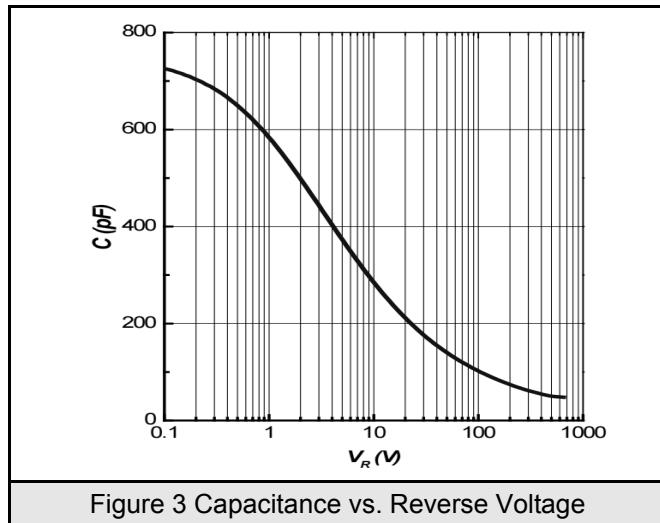
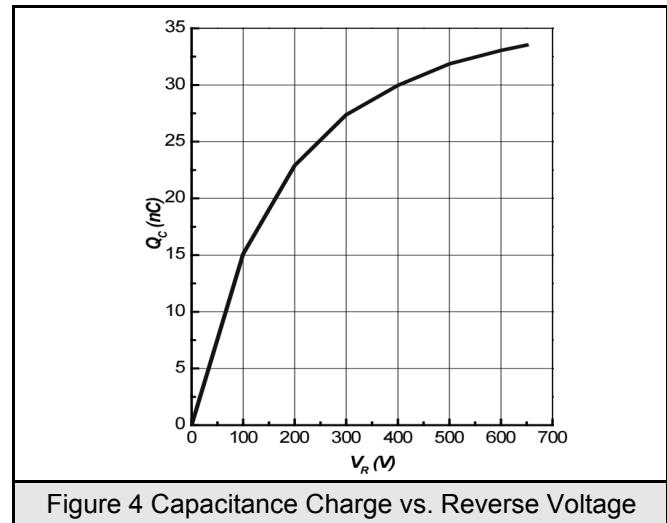
Absolute Maximum Ratings ($T_c=25^\circ C$)

Symbol	Parameter		Data	Unit
V_{RRM}	Repetititve Peak Reverse Voltage		650	V
I_F	Continuous Forward		15	A
I_{FSM}	$T_c=25^\circ C, T_p=8.3mS, \text{Half Sine Pulse}$ Non-Repetitive Forward Surge Current		120	A
P_{tot}	Power Dissipation	$T_c=25^\circ C$	214	W
T_J	Operating Junction Temperature		-55~175	°C
T_{STG}	Storage Temperature		-55~175	°C
$R_{\theta JC}$	Thermal Resistance Junction to Case (per leg)		TYP:0.7	°C/W

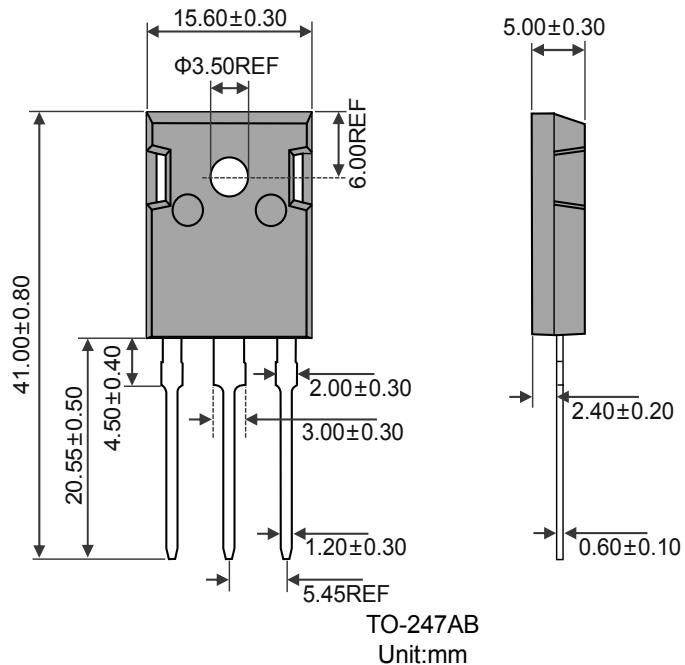


Electricity Character Per Diode (Tc=25°C)

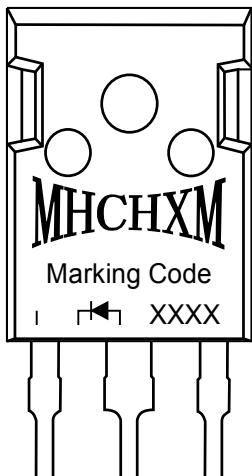
Item	Test Condition	Value(min)	Value(typ)	Value(max)	Unit
V _B	—	Tc=25°C	650	—	V
V _F	IF=15A	Tc=25°C	—	1.35	V
		Tc=175°C	—	1.45	V
I _R	VR=650V	Tc=25°C	—	6	uA
		Tc=175°C	—	25	uA
C	f=1MHZ	VR=1V	—	580	pF
		VR=200V	—	74	pF
		VR=400V	—	54	pF
Q _C	VR=400V,IF=10A,di/dt=200A/μS	—	30	—	nC

Electrical Characteristic Curves

Figure 1 Forward Characteristics

Figure 2 Reverse Characteristics

Figure 3 Capacitance vs. Reverse Voltage

Figure 4 Capacitance Charge vs. Reverse Voltage


Package Outline Dimensions



Marking Information



“MHCHXM”= Product Logo
“Marking Code”= The Following
“XXXX”= Date Code Marking

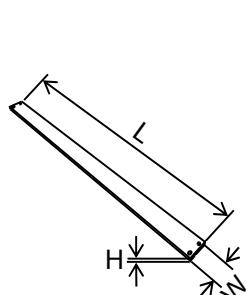
Marking Code	Part Number
ECR1565NPT	ECR1565NPT-HF



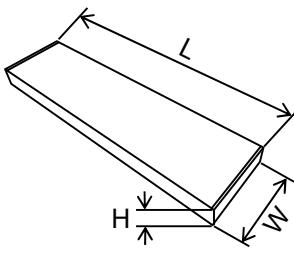
Packing Information

Packaging	Part Number	Quantity(pcs)	Size(mm)
Tube	Tube	30	L495×W46×H7
	Inner Box	360	L520×W115×H58
	Outer Box	1800	L540×W320×H135

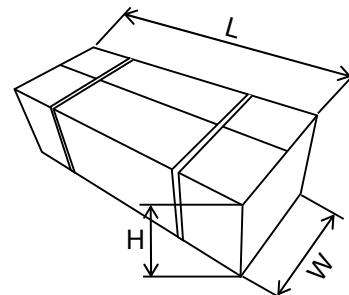
Packaging:Tube



Tube



Tube Inner Box



Tube Outer Box

Notes

Lead Forming

1. During lead frame bending, the lead frame should be bent at a distance more than 3mm from bottom of the epoxy. And the bending degree should not exceed 90°.

Note: The lead frame must be secured and do not touch the epoxy before bending to avoid damage to the transistor. In addition, when using a mold for a large number of lead molding, the structure of the fixed lead must be set, and it should be noted that the lead pressure rod structure cannot exert pressure on the epoxy resin body.

2. Do not bend the lead repeatedly. Do not bend the lead outward



Heat sink mounting

For power devices, in order to reduce junction temperature, heat dissipation blocks are usually used to disperse heat to the outside, and semiconductor power devices installed on the heat dissipation blocks can effectively dissipate heat without losing the reliability of the semiconductor, so the following matters should be noted when using:

1. Pay attention to the selection of silicone cream

In order to improve the thermal conductivity and heat dissipation effect of the device and the heat dissipation block, generally apply a thin layer of silicone grease evenly on the contact surface of the device and the heat dissipation block. Choose a silicone grease with low oil separation degree. Do not overapply it, otherwise it will attach too much stress to the resin.

2. Optimum torque is required

When using the fastening torque, pay attention not to use too much torque, so as not to damage the epoxy resin body, pay attention to the smooth cooling block body, no file chips and other foreign bodies between the transistor and the cooling block, pay attention to the selection of screws, nuts, gaskets and washers, so as not to cause damage to the transistor due to improper selection.

Soldering

1. Pay special attention to welding. When welding, the distance between the solder joint and the epoxy ball should be greater than 3mm, and it is recommended to weld it outside the tie rod base.

2. Avoid applying any pressure to the lead frame while the transistor is at high temperatures, especially when welding. Dip welding and manual welding should not be done more than once

Notes:

For specific precautions, please refer to our company's relevant technical documents or visit our official website at <http://www.jshxm.com>



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1. Above specification may be changed without notice. MHCHXM will reserve authority on material change for above specification.
2. The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.
3. When using this product, please observe the absolute maximum ratings and the instructions for use outlined in these specification sheets. MHCHXM assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
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