

■ Features

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

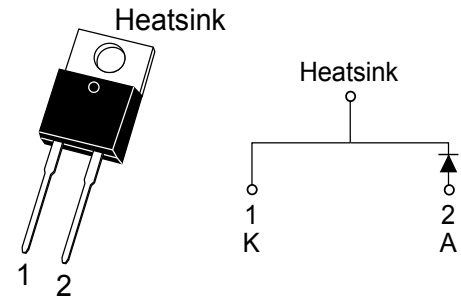
■ Benefits

- High-speed switching
- Low heat dissipation requirements
- Reduce size and cost of the system
- High-reliability
- System efficiency improvement

■ Applications

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

V_{RRM}	650V
I_F	16A($T_c=154^\circ\text{C}$)
Q_C	48nC



Package:TO-220AC-A

ECR1665A-HF

HF=Halogen Free

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

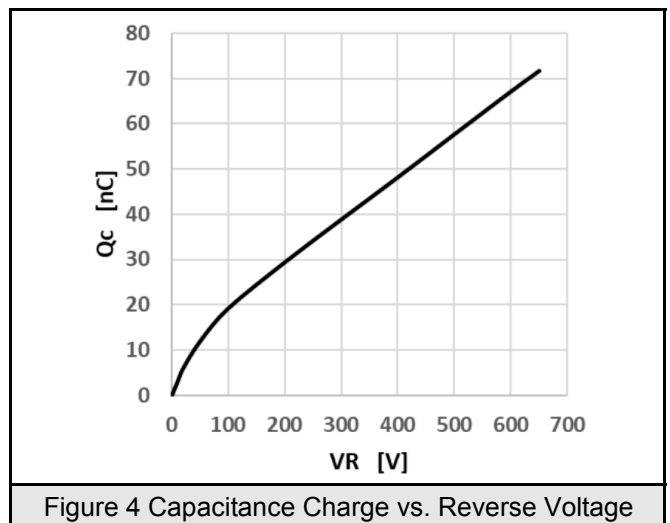
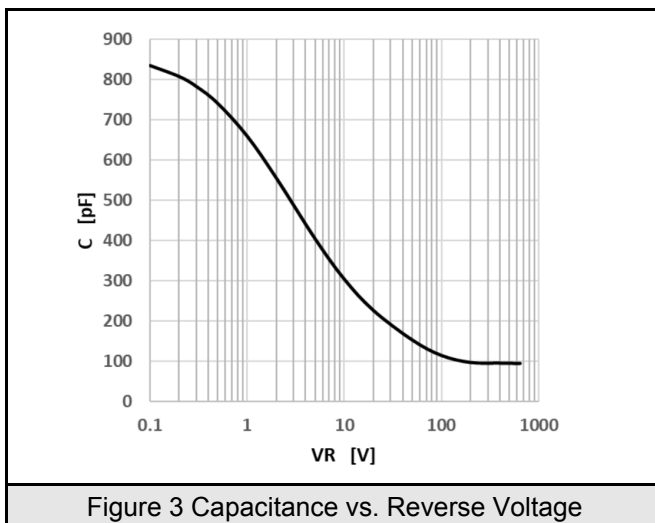
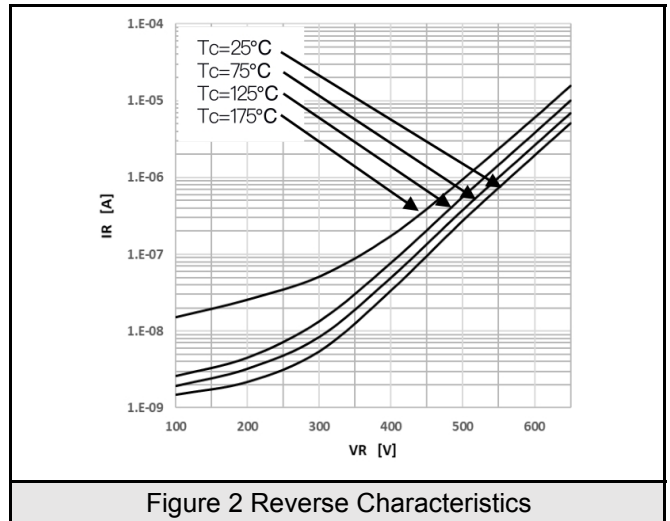
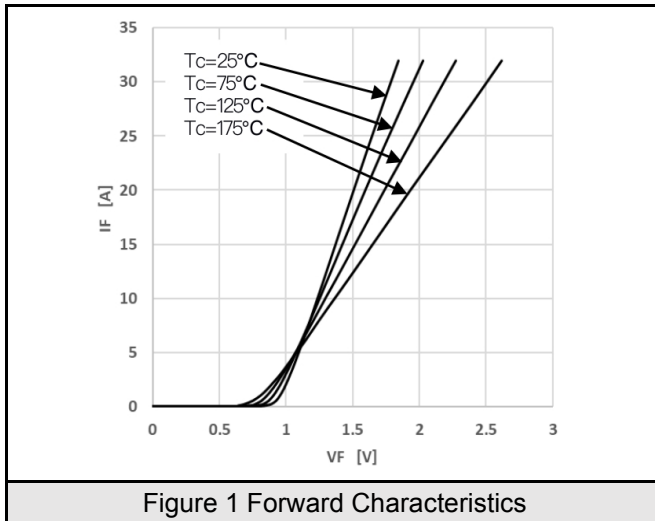
Symbol	Parameter	Data	Unit
V_{RRM}	Repetitive Peak Reverse Voltage	650	V
I_F	Continuous Forward Current	$T_c=25^\circ\text{C}$	51 A
		$T_c=135^\circ\text{C}$	24 A
		$T_c=154^\circ\text{C}$	16 A
I_{FSM}	Non-Repetitive Forward Surge Current	$T_c=25^\circ\text{C}, T_p=10\text{mS}, \text{Half Sine Pulse}$	120 A
		$T_c=110^\circ\text{C}, T_p=10\text{mS}, \text{Half Sine Pulse}$	100 A
I_{FRM}	Repetitive Peak Forward Surge Current	$T_c=25^\circ\text{C}, T_p=10\text{mS}, \text{Half Sine Pulse}$	103 A
$\int i^2 dt$	$i^2 t$ value	$T_c=25^\circ\text{C}, T_p=10\text{ms}$	72 A^2S
		$T_c=110^\circ\text{C}, T_p=10\text{ms}$	50 A^2S
P_{tot}	Power Dissipation	$T_c=25^\circ\text{C}$	214 W
		$T_c=110^\circ\text{C}$	93 W
		$T_c=150^\circ\text{C}$	36 W
T_J	Operating Junction Temperature	-55~175	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55~175	$^\circ\text{C}$
$R_{\theta JC}$	Thermal Resistance Junction to Case (per leg)	TYP:0.7	$^\circ\text{C/W}$



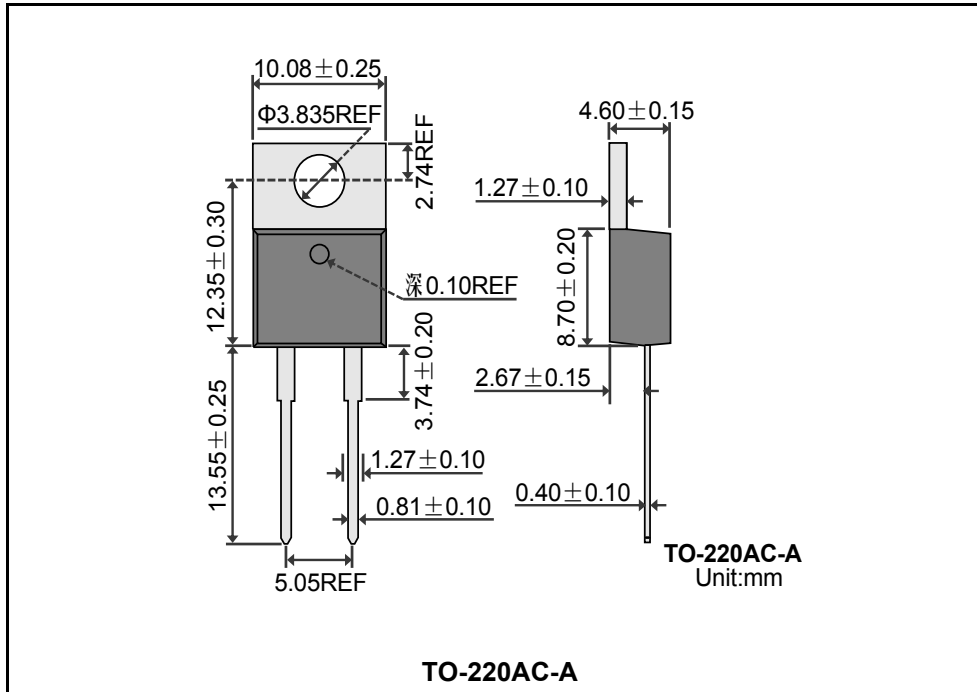
Electricity Character Per Diode (Tc=25°C)

Item	Test Condition		Value(min)	Value(typ)	Value(max)	Unit
V _B	—	T _c =25°C	650	—	—	V
V _F	IF=16A	T _c =25°C	—	1.43	1.6	V
		T _c =175°C	—	1.72	—	V
I _R	VR=650V	T _c =25°C	—	7	100	uA
		T _c =175°C	—	15	—	uA
C	f=1MHZ	VR=1V	—	659	—	pF
		VR=200V	—	96	—	pF
		VR=400V	—	95	—	pF
Q _C	VR=400V		—	48	—	nC
E _C	VR=400V		—	8	—	uJ

Electrical Characteristic Curves



Package Outline Dimensions



Marking Information



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

Package	Marking Code	Part Number
TO-220AC-A	ECR1665A	ECR1665A-HF

Packing Information

Packaging	Package	Part Number	Quantity	Size
Tube	TO-220AC-A	Tube	50 pieces	530*33*7mm
		Inner Box	1000 pieces	558*150*40mm
		Outer Box	5000 pieces	570*235*170mm

Notice:

Jiangsu Mhchxm Electronics Technology Co.Ltd., have the right to modify the specification revision, all information are subject to change without notice.

