

### ■ Features

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

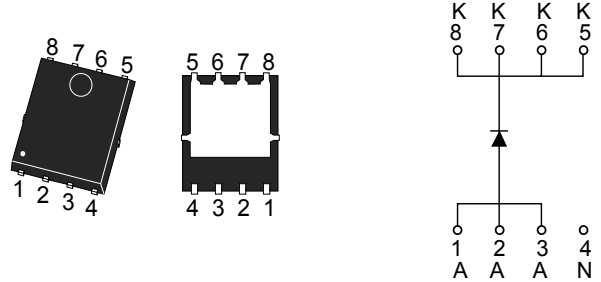
### ■ Benefits

- 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
$I_F$	8A( $T_c=156^{\circ}\text{C}$ )
$Q_C$	21nC



Package:PDFN5060-8L

ECR865AN-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	$T_c=25^{\circ}\text{C}$	31	A
		$T_c=135^{\circ}\text{C}$	14	A
		$T_c=156^{\circ}\text{C}$	8	A
$I_{FSM}$	Non-Repetitive Forward Surge Current	$T_c=25^{\circ}\text{C}, T_p=8.3\text{mS}, \text{Half Sine Pulse}$	70	A
$P_{tot}$	Power Dissipation	$T_c=25^{\circ}\text{C}$	107	W
$T_J$	Operating Junction Temperature		$-55 \sim 175$	$^{\circ}\text{C}$
$T_{STG}$	Storage Temperature		$-55 \sim 175$	$^{\circ}\text{C}$
$R_{\theta JC}$	Thermal Resistance Junction to Case (per leg)		TYP:1.4	$^{\circ}\text{C/W}$

### Electricity Character Per Diode ( $T_c=25^{\circ}\text{C}$ )

Item	Test Condition		Value(min)	Value(typ)	Value(max)	Unit
$V_B$	—	$T_c=25^{\circ}\text{C}$	650	—	—	V
$V_F$	$I_F=8\text{A}$	$T_c=25^{\circ}\text{C}$	—	1.27	1.5	V
		$T_c=175^{\circ}\text{C}$	—	1.38	—	V
$I_R$	$V_R=650\text{V}$	$T_c=25^{\circ}\text{C}$	—	5	50	$\mu\text{A}$
		$T_c=175^{\circ}\text{C}$	—	25	—	$\mu\text{A}$
$C$	$f=1\text{MHZ}$	$V_R=1\text{V}$	—	430	—	pF
		$V_R=200\text{V}$	—	54	—	pF
		$V_R=400\text{V}$	—	39	—	pF
$Q_C$	$V_R=400\text{V}, I_F=8\text{A}, di/dt=200\text{A}/\mu\text{S}$		—	21	—	nC



## Electrical Characteristic Curves

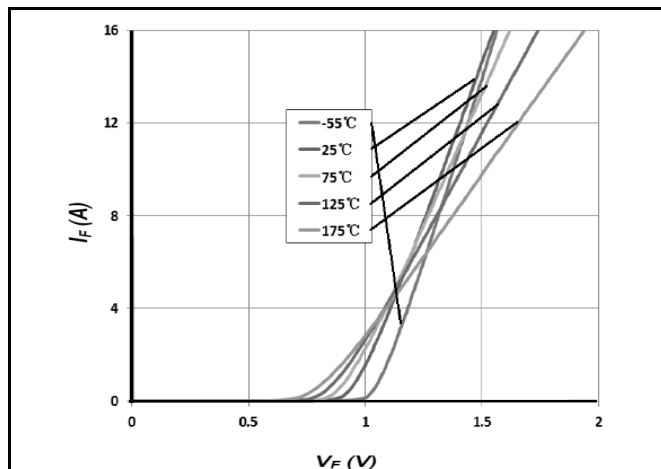


Figure 1 Forward Characteristics

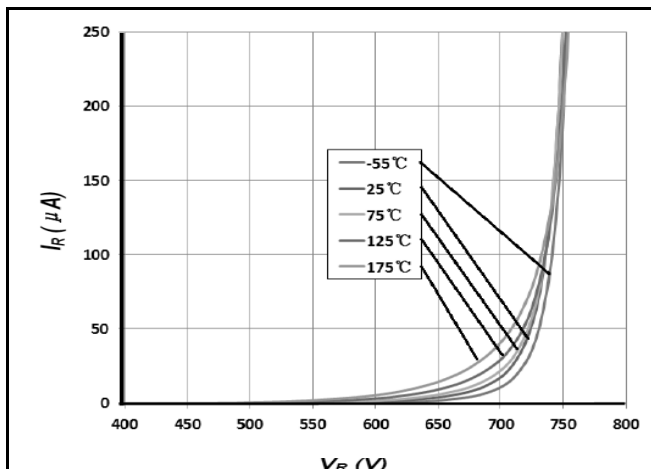


Figure 2 Reverse Characteristics

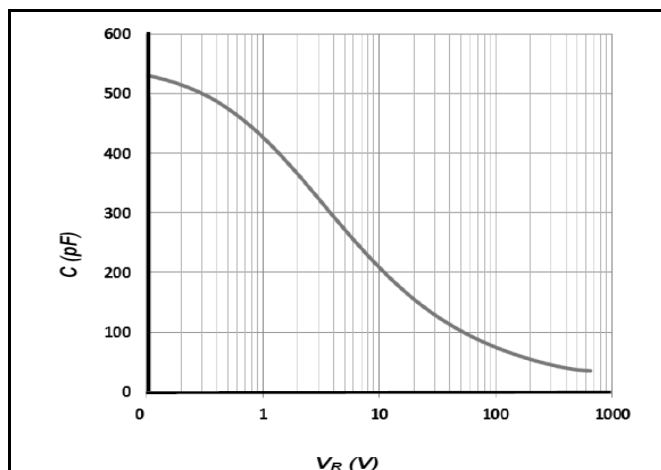


Figure 3 Capacitance vs. Reverse Voltage

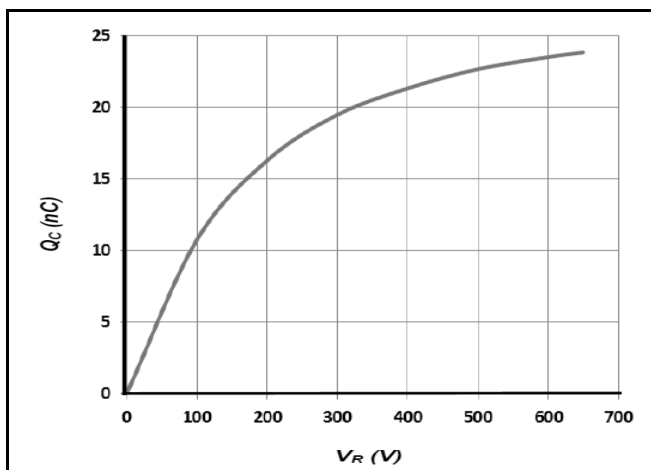
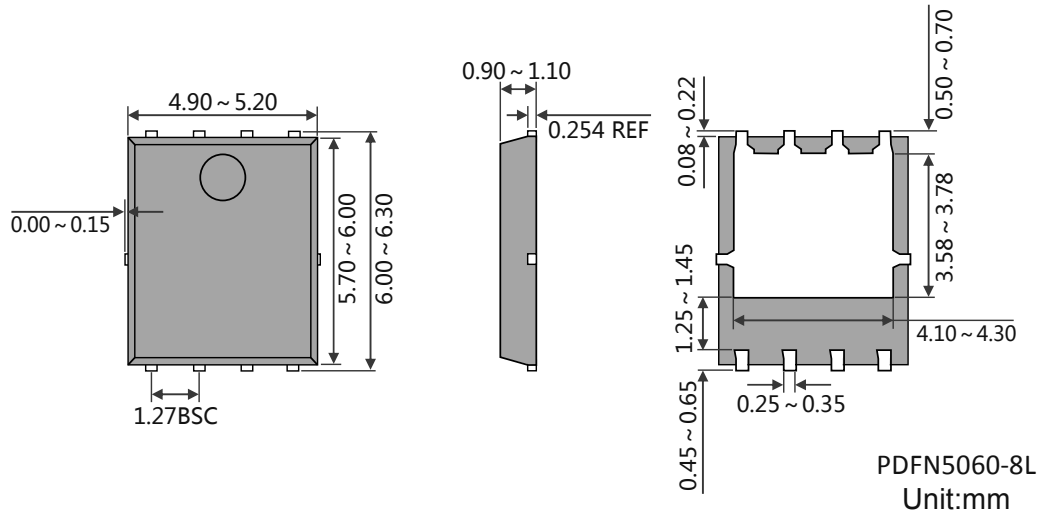


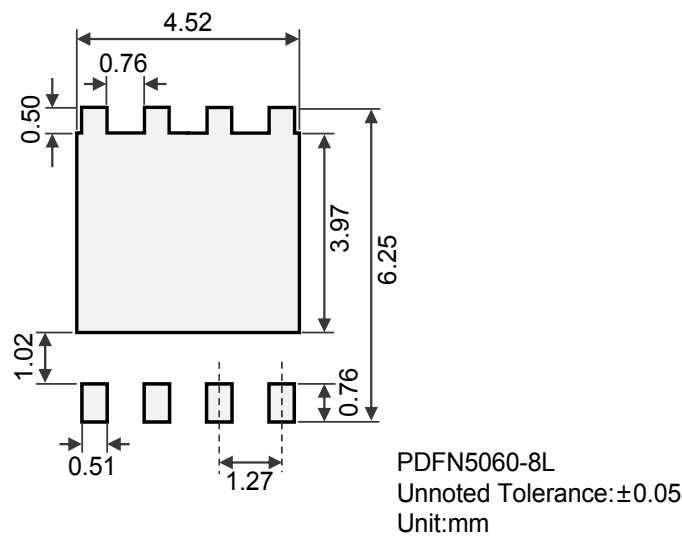
Figure 4 Capacitance Charge vs. Reverse Voltage



### Package Outline Dimensions



### Suggested Solder Pad Layout



### Marking Information

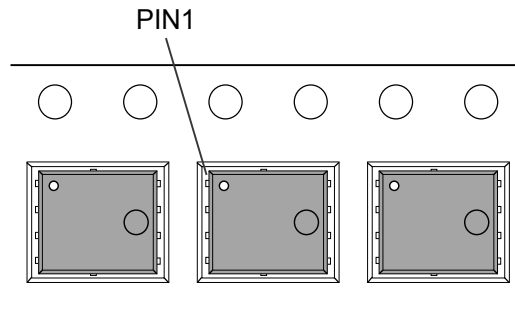


“MHCHXM”= Product Logo  
“Marking Code”= The Following  
“XXXX”= Date Code Marking

Marking Code	Part Number
ECR865AN	ECR865AN-HF



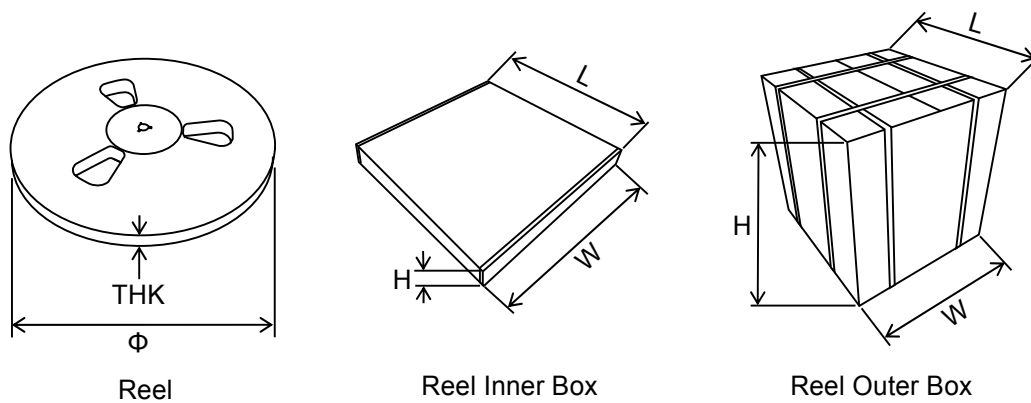
### The Orientation Of The Product In The Carrier Tape



### Packing Information

Packaging	Part Number	Quantity(pcs)	Size(mm)
Reel	Reel	5000	Φ330×THK15
	Inner Box	10000	L355×W335×H48
	Outer Box	80000	L415×W375×H360

#### Packaging:Reel



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