

■ Features

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

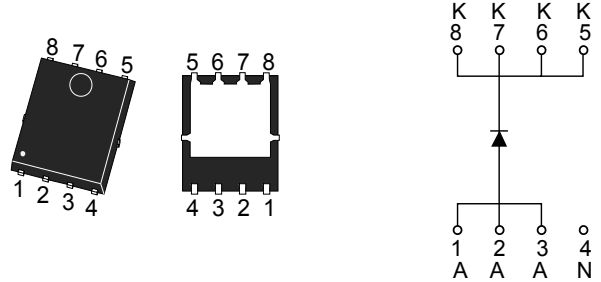
■ Benefits

- 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	6A($T_c=130^{\circ}C$)
Q_C	17nC



Package:PDFN5060-8L

ECR665AN-HF

HF=Halogen Free

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

Symbol	Parameter		Data	Unit
V_{RRM}	Repetitive Peak Reverse Voltage		650	V
I_F	Continuous Forward Current	$T_c=110^{\circ}C$	7.5	A
		$T_c=130^{\circ}C$	6	A
I_{FSM}	Non-Repetitive Forward Surge Current	$T_c=25^{\circ}C, T_p=8.3mS, \text{Half Sine Pulse}$	40	A
P_{tot}	Power Dissipation	$T_c=25^{\circ}C$	30	W
T_J	Operating Junction Temperature		-55~175	$^{\circ}C$
T_{STG}	Storage Temperature		-55~175	$^{\circ}C$
$R_{\theta JC}$	Thermal Resistance Junction to Case (per leg)		TYP:5	$^{\circ}C/W$

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

Item	Test Condition		Value(min)	Value(typ)	Value(max)	Unit
V_B	—	$T_c=25^{\circ}C$	650	—	—	V
V_F	$I_F=6A$	$T_c=25^{\circ}C$	—	1.3	1.5	V
		$T_c=175^{\circ}C$	—	1.38	—	V
I_R	$V_R=650V$	$T_c=25^{\circ}C$	—	4	50	μA
		$T_c=175^{\circ}C$	—	20	—	μA
C	$f=1MHz$	$V_R=1V$	—	305	—	pF
		$V_R=200V$	—	39	—	pF
		$V_R=400V$	—	28	—	pF
Q_C	$V_R=400V, I_F=6A, di/dt=200A/\mu S$		—	17	—	nC



Electrical Characteristic Curves

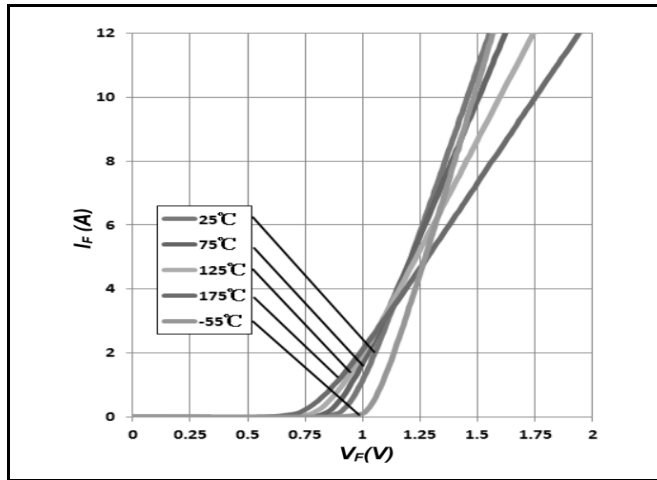


Figure 1 Forward Characteristics

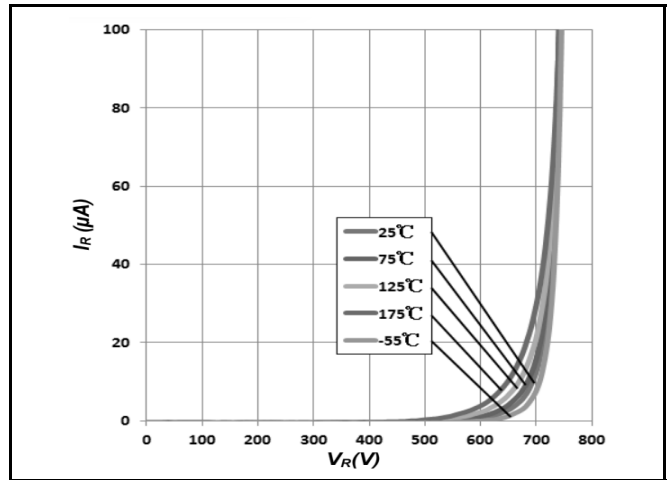


Figure 2 Reverse Characteristics

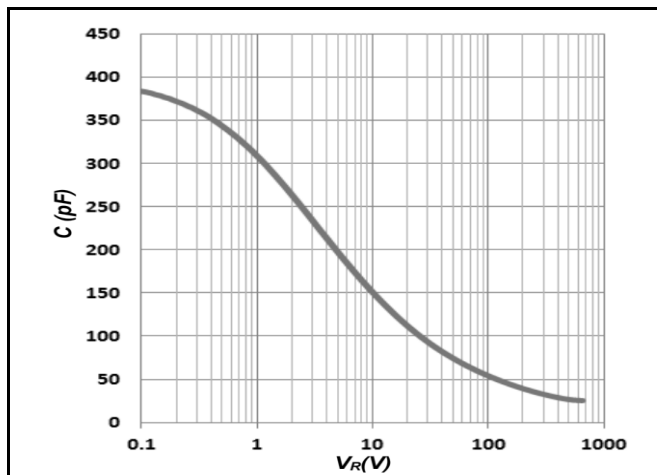


Figure 3 Capacitance vs. Reverse Voltage

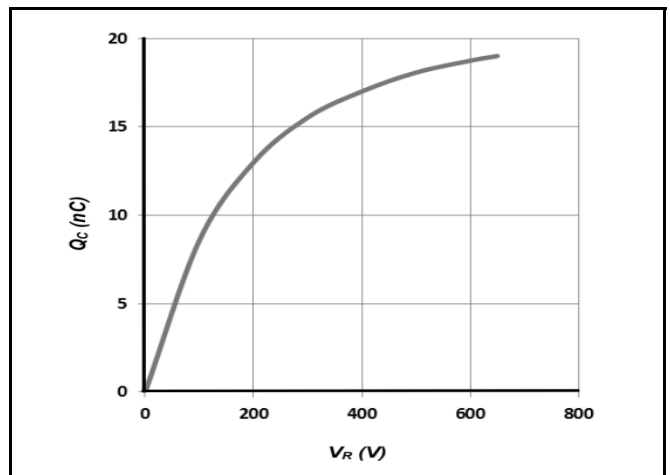
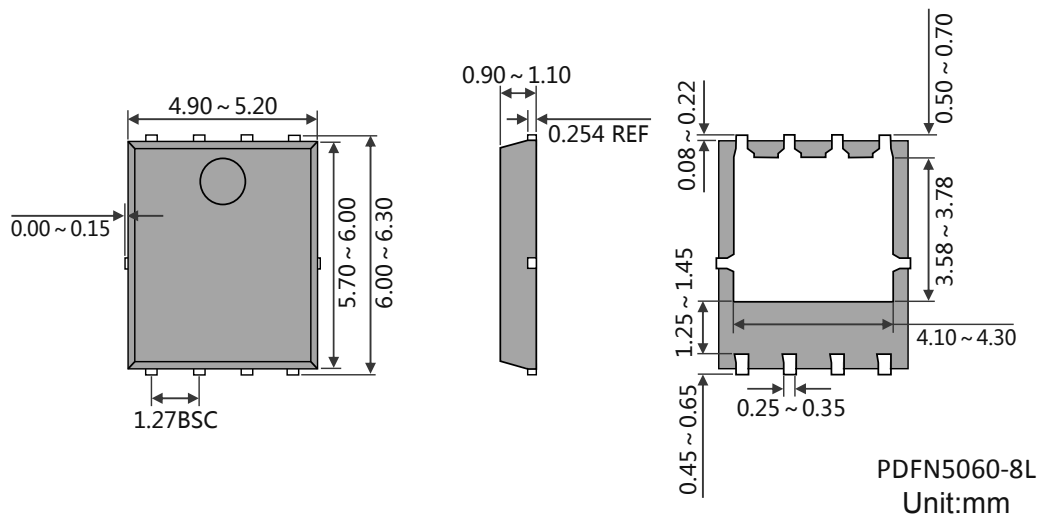


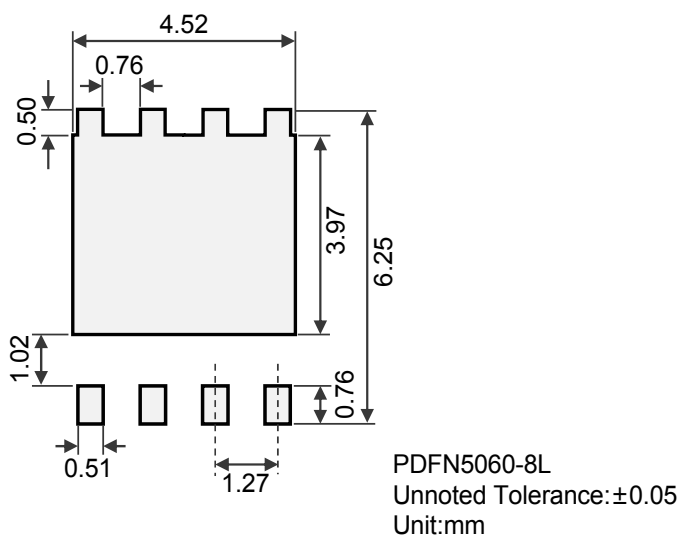
Figure 4 Capacitance Charge vs. Reverse Voltage



Package Outline Dimensions



Suggested Solder Pad Layout



Marking Information

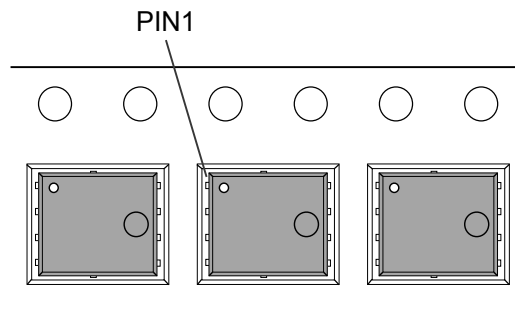


“MHCHXM”= Product Logo
“Marking Code”= The Following
“XXXX”= Date Code Marking

Marking Code	Part Number
ECR665AN	ECR665AN-HF



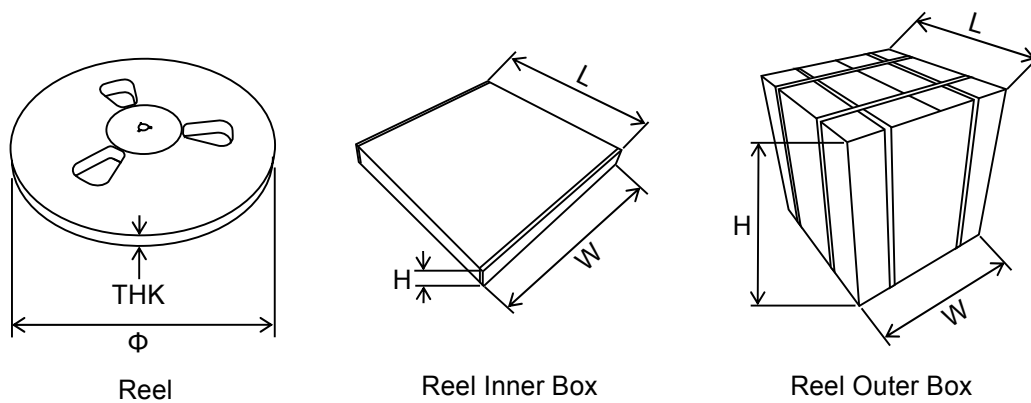
The Orientation Of The Product In The Carrier Tape



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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