

VRRM	IF ( TC≤135℃)	QC
650V	11A	23nC

### Applications:

- Switch Mode Power Supplies
- Power Factor Correction
- Motor drive, PV Inverter, Wind Power Station

### Features:

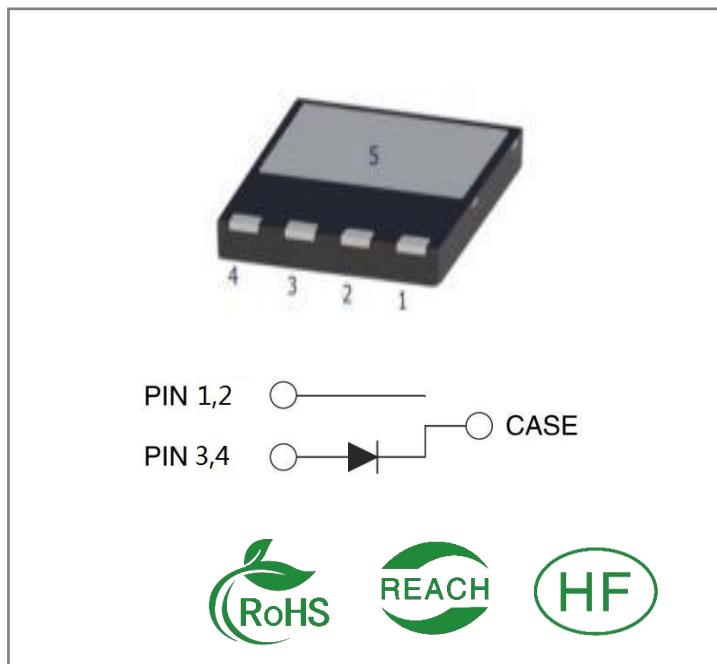
- Zero Reverse Recovery Current
- Zero Forward Recovery Voltage
- Positive Temperature Coefficient on VF
- Temperature-independent Switching
- 175°C Operating Junction Temperature

### Benefits:

- Replace Bipolar with Unipolar Device
- Reduction of Heat Sink Size
- Parallel Devices Without Thermal Runaway
- Essentially No Switching Losses

### Ordering Information

Part Number	Package	Marking	Packing	Qty.
RSS10065R	DFN8*8	RSS10065R	Tape&reel	3000 PCS



**Maximum Ratings** (T<sub>J</sub> = 25°C unless otherwise specified)

Symbol	Parameter	Value	Unit	Test Conditions	Note
VRRM	Repetitive Peak Reverse Voltage	650	V	TC = 25°C	
VRSM	Surge Peak Reverse Voltage	650	V	TC = 25°C	
VR	DC Blocking Voltage	650	V	TC = 25°C	
IF	Forward Current	28 11 10	A	TC ≤ 25°C TC ≤ 135°C TC ≤ 140°C	
IFSM	Non-Repetitive Forward Surge Current	50 40	A	TC = 25°C, tp = 10ms, Half Sine Wave TC = 110°C, tp = 10ms, Half Sine Wave	
IFRM	Repetitive Peak Forward Surge Current	40	A	TC = 25°C, tp = 10ms, Half Sine Wave	
Ptot	Power Dissipation	83	W	TC = 25°C	
TC	Maximum Case Temperature	140	°C		
TJ, TSTG	Operating Junction and Storage Temperature	-55 to 175	°C		

**Electrical Characteristics** (T<sub>J</sub> = 25°C unless otherwise specified)

Symbol	Parameter	Typ.	Max.	Unit	Test Conditions	Note
VF	Forward Voltage	1.5 1.8	1.8	V	IF = 10A, T <sub>J</sub> = 25°C IF = 10A, T <sub>J</sub> = 175°C	
IR	Reverse Current	10 190	80	μA	VR = 650V, T <sub>J</sub> = 25°C VR = 650V, T <sub>J</sub> = 175°C	
C	Total Capacitance	387 48 33	/	pF	VR = 1V, T <sub>J</sub> = 25°C, f = 1MHz VR = 200V, T <sub>J</sub> = 25°C, f = 1MHz VR = 400V, T <sub>J</sub> = 25°C, f = 1MHz	
QC	Total Capacitive Charge	23	/	nC	VR = 400V,	

**Thermal Characteristics** (T<sub>J</sub> = 25°C unless otherwise specified)

Symbol	Parameter	Typ.	Unit	Note
RθJC	Thermal Resistance from Junction to Case	1.8	°C/W	

## Typical Feature Curve

Figure 1. Forward Characteristics

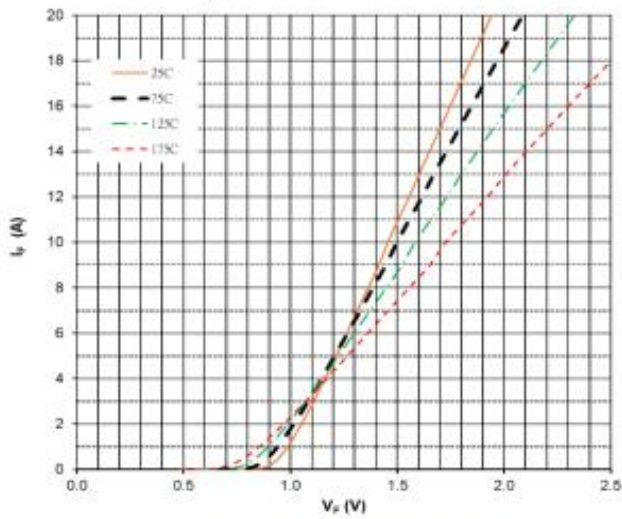


Figure 2. Forward Characteristics

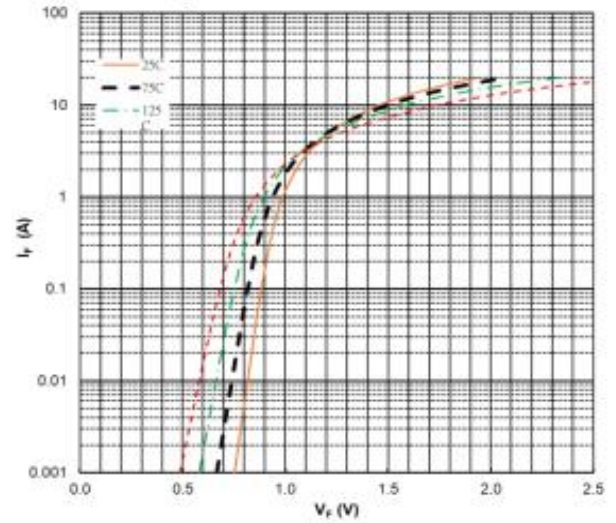


Figure 3. Reverse Characteristics

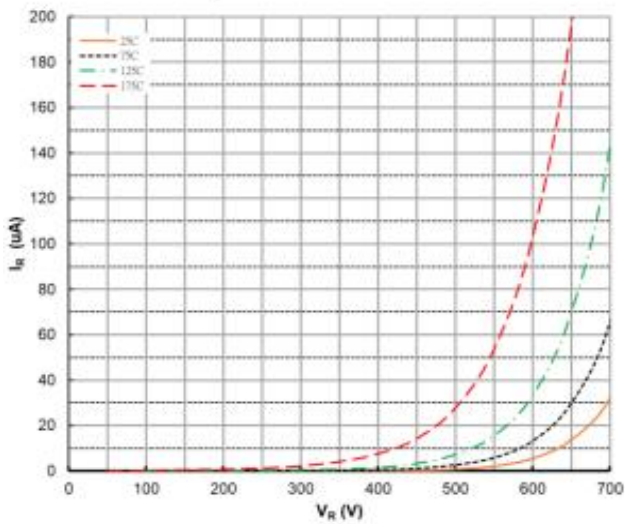


Figure 4. Power Derating

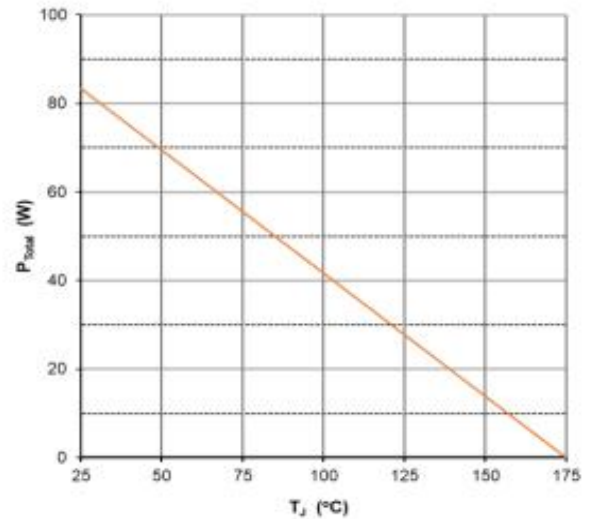


Figure 5. Capacitance vs Reverse Voltage

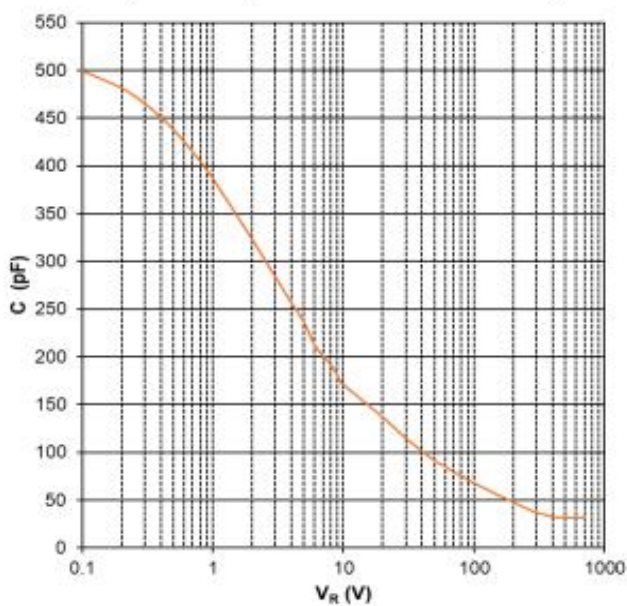
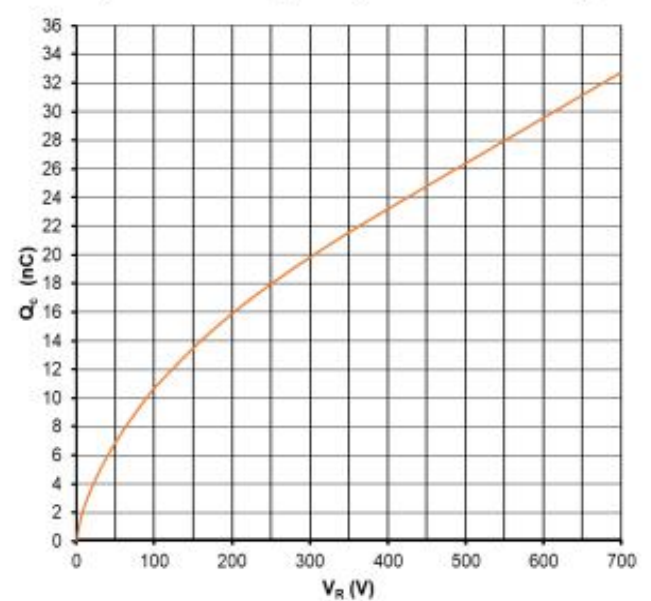
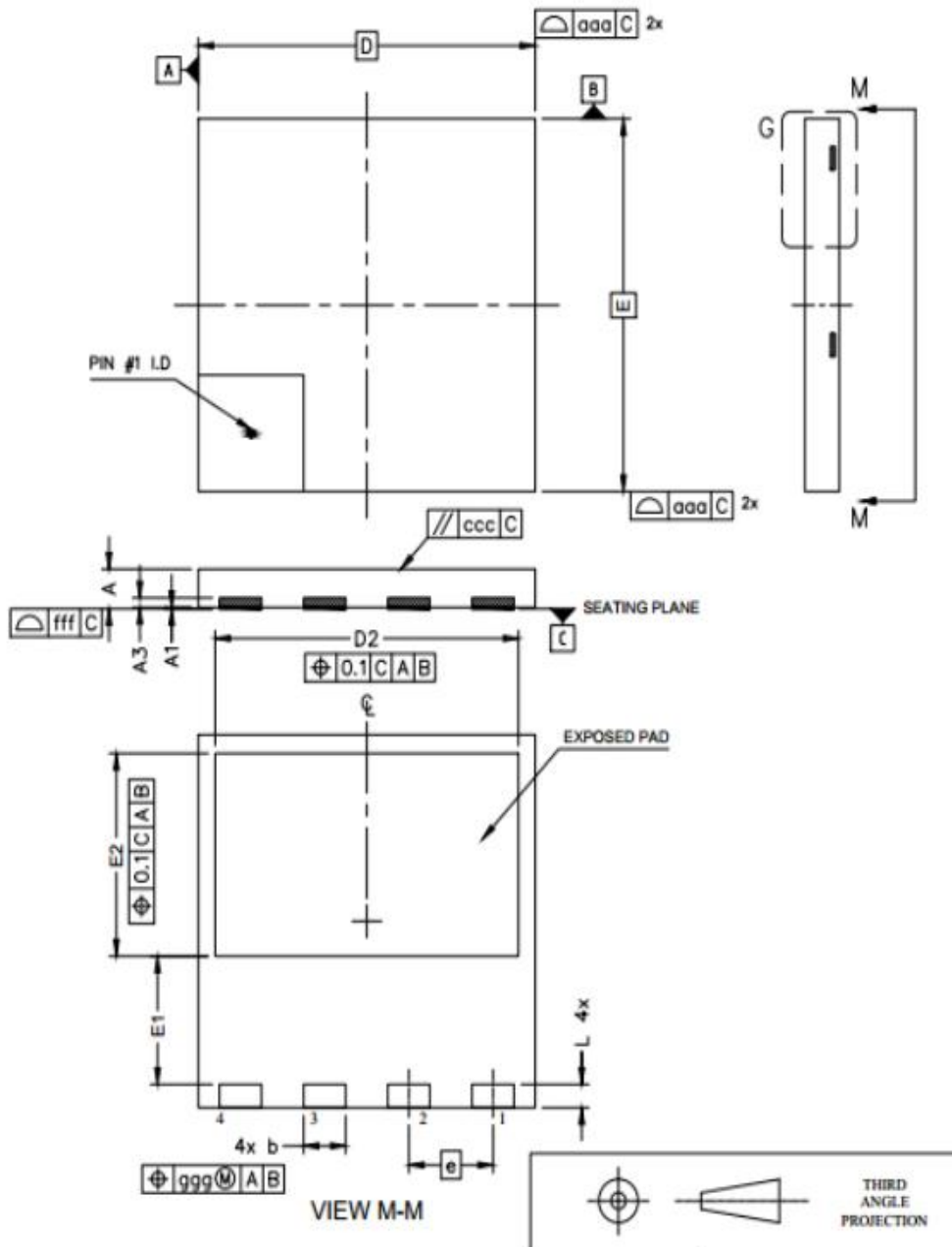


Figure 6. Recovery Charge vs Reverse Voltage



Package outline drawing(DFN8\*8 Unit: mm )



Items	Millimeters	
	Min	Max
A	0.75	0.95
A1	0.00	0.05
A3	0.10	0.30
b	0.9	1.10
D	7.90	8.10
E	7.90	8.10
D2	7.10	7.30
E1	2.65	2.85
E2	4.25	4.45
e	2.00 (BSC)	
L	0.40	0.60
aaa	0.10	
ggg	0.05	
ccc	0.05	
fff	0.05	

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