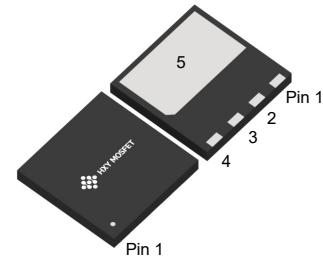




Features

- 650-Volt Schottky Rectifier
- Zero Reverse Recovery Current
- Zero Forward Recovery Voltage
- High-Frequency Operation
- Temperature-Independent Switching Behavior
- Extremely Fast Switching
- Positive Temperature Coefficient on V_F



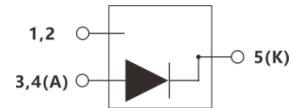
Benefits

- Replace Bipolar with Unipolar Rectifiers
- Essentially No Switching Losses
- Higher Efficiency
- Reduction of Heat Sink Requirements
- Parallel Devices Without Thermal Runaway

DFN8X8B

Applications

- Switch Mode Power Supplies
- Power Factor Correction
- Motor Drives



Part Number	Package	Qty(PCS)
FFSM0665A	DFN8X8B	3000

Maximum Ratings ($T_c = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Value	Unit	Test Conditions
V_{RRM}	Repetitive Peak Reverse Voltage	650	V	
V_{RSM}	Surge Peak Reverse Voltage	650	V	
I_F	Continuous Forward Current	23.1 10.8 8	A	$T_c=25^\circ\text{C}$ $T_c=135^\circ\text{C}$ $T_c=150.5^\circ\text{C}$
I_{FRM}	Repetitive Peak Forward Surge Current	30	A	$T_c=25^\circ\text{C}$, $t_p = 10$ ms, Half Sine Wave
I_{FSM}	Non-Repetitive Peak Forward Surge Current	60	A	$T_c=25^\circ\text{C}$, $t_p = 10$ ms, Half Sine Wave
P_{tot}	Power Dissipation	93 40	W	$T_c=25^\circ\text{C}$ $T_c=110^\circ\text{C}$
T_J, T_{stg}	Operating Junction and Storage Temperature	-55 to +175	°C	
$\int i^2 dt$	$i^2 dt$ value	18	A ² s	$T_c=25^\circ\text{C}$, $t_p = 10$ ms, Half Sine Wave



Electrical Characteristics

Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Conditions
V_{DC}	DC Blocking Voltage	650			V	
V_F	Forward Voltage		1.42 1.88	1.7 2.5	V	$I_F = 8 \text{ A} \quad T_J = 25^\circ\text{C}$ $I_F = 8 \text{ A} \quad T_J = 175^\circ\text{C}$
I_R	Reverse Current		0.12 0.91	50 100	μA	$V_R = 650 \text{ V} \quad T_J = 25^\circ\text{C}$ $V_R = 650 \text{ V} \quad T_J = 175^\circ\text{C}$
Q_c	Total Capacitive Charge		21		nC	$V_R = 400 \text{ V} \quad T_J = 25^\circ\text{C}$
C	Total Capacitance		395 42 41		pF	$V_R = 0 \text{ V}, T_J = 25^\circ\text{C}, f = 1 \text{ MHz}$ $V_R = 200 \text{ V}, T_J = 25^\circ\text{C}, f = 1 \text{ MHz}$ $V_R = 400 \text{ V}, T_J = 25^\circ\text{C}, f = 1 \text{ MHz}$
E_c	Capacitance Stored Energy		5		μJ	$V_R = 400 \text{ V}$

Thermal Characteristics

Symbol	Parameter	Typ.	Unit
$R_{\theta JC}$	Thermal Resistance from Junction to Case	1.61	$^\circ\text{C/W}$

Typical Performance

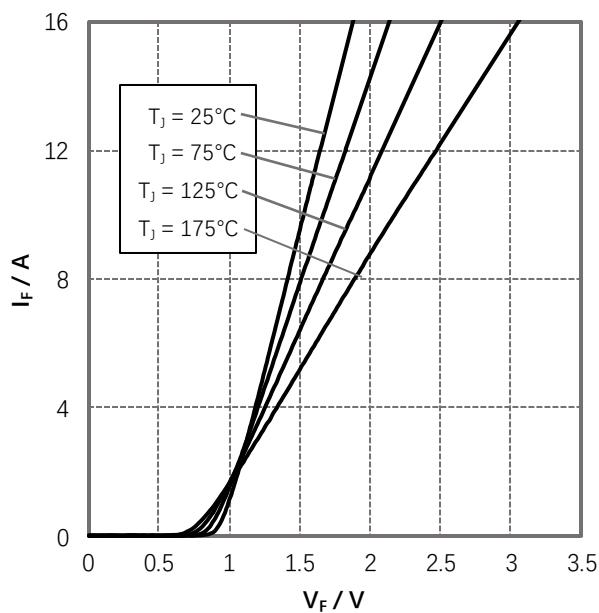


Figure 1. Forward Characteristics

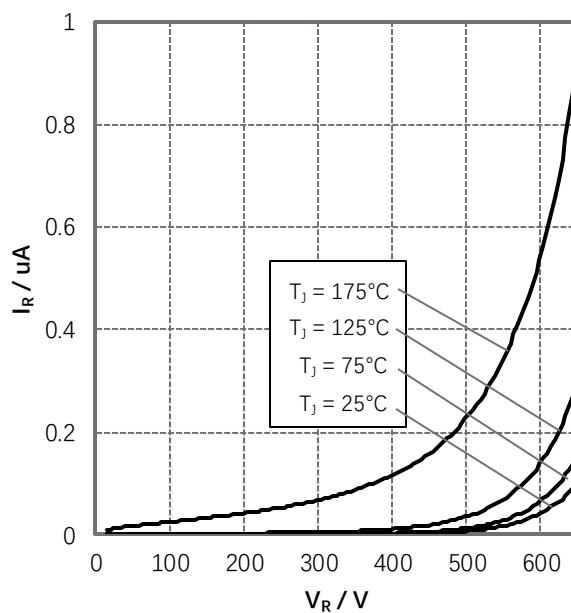
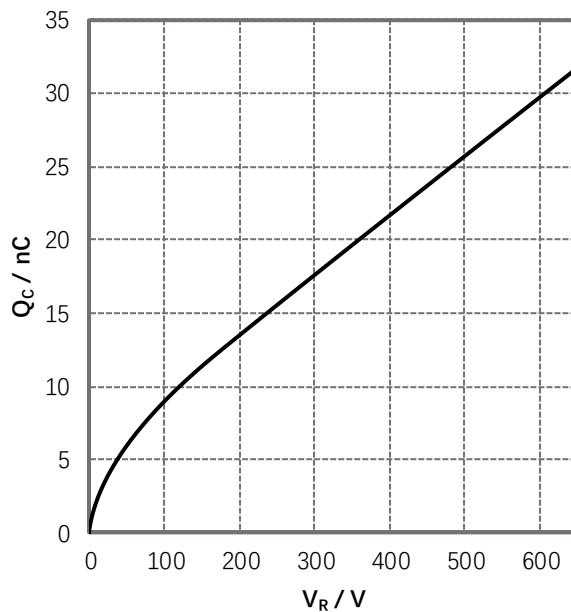
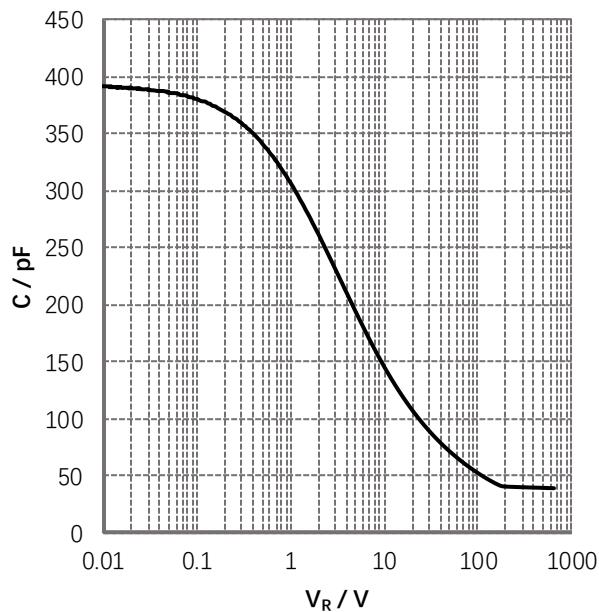
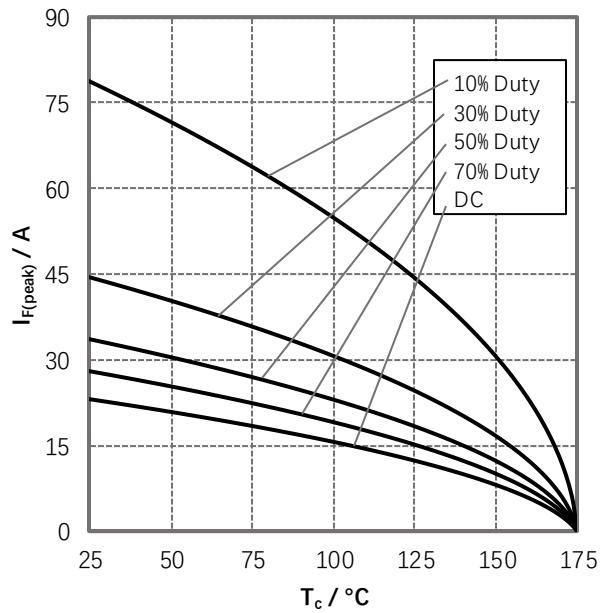
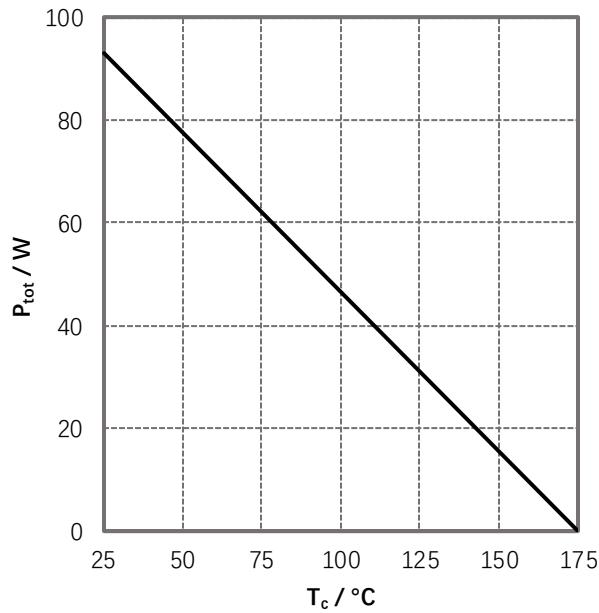


Figure 2. Reverse Characteristics



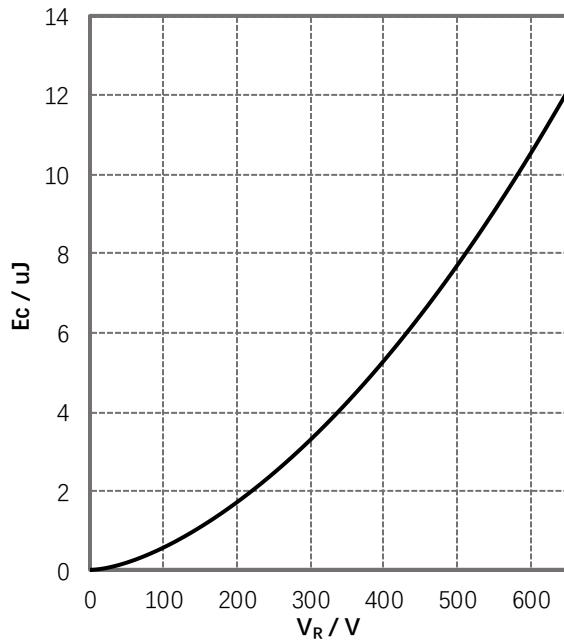


Figure 7. Capacitance Stored Energy

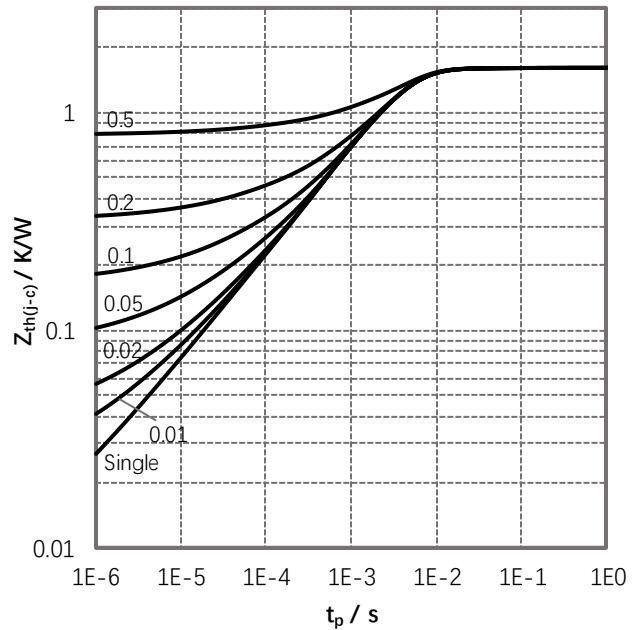
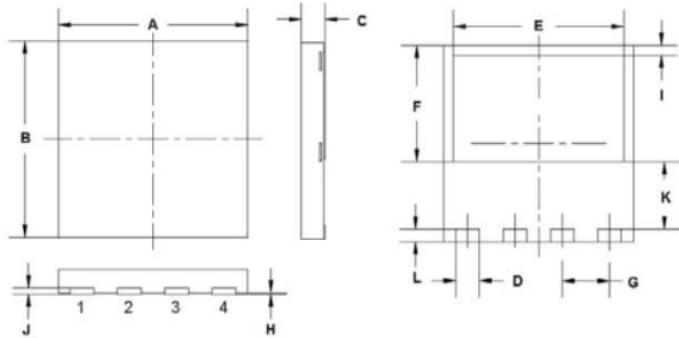


Figure 8. Transient Thermal Impedance



Package Information DFN8X8B



Unit: mm

Dimension	Min.	Max.
A	7.90	8.10
B	7.90	8.10
C	0.75	0.95
D	0.90	1.10
E	7.10	7.30
F	4.65	4.85
G	1.80	2.20
H	0.00	0.05
I	0.30	0.50
J	0.10	0.30
K	2.65	2.85
L	0.40	0.60



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