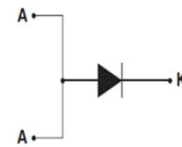


Features

- FRED (Planar) wafer construction
- Ultrafast recovery time
- Low forward voltage drop, low power loss
- High efficiency
- Plastic package has underwriters Laboratory Flammability Classification 94V-0



Package: POWER QFN5x6



Schematic Diagram

Mechanical Data

- Case: Epoxy, molded
- Weight: 0.1 grams (approximately)
- Lead yemperature for soldering purposes: 260°C max. for 10 sec
- 3000 units per reel

Maximum Ratings & Electrical Characteristics

($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Test Conditions		Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage			V_{RRM}	600	V
Working Peak Reverse Voltage			V_{RWM}	600	V
Maximum DC Blocking Voltage			V_{DC}	600	V
Maximum Average Forward Rectified Current @ $T_c=105^\circ\text{C}$			$I_{F(AV)}$	10	A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load per Diode			I_{FSM}	125	A
Voltage Rate of Change (rated V_R)			DV/dt	10000	V/ μs
Operating Junction Temperature Range			T_J	- 55 to+150	$^\circ\text{C}$
Storage Temperature Range			T_{STG}	- 55 to+150	$^\circ\text{C}$
Maximum Reverse Recover Time ($I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rec}=0.25\text{A}$)			T_{rr}	50	ns
Maximum Instantaneous Forward Voltage per Leg	$I_F=10\text{A}$ $I_F=10\text{A}$	$T_c=25^\circ\text{C}$ $T_c=125^\circ\text{C}$	V_F	1.60 1.50	V
Maximum Reverse Current per Leg at Working Peak Reverse Voltage		$T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$	I_R	10 500	μA μA
Thermal Characteristics $T_A=25^\circ\text{C}$ unless otherwise noted					
Symbol	Parameter		Typ.	Unit	
$R_{\theta JC}$	Thermal Resistance, Junction to Case per Leg		2.5	$^\circ\text{C/W}$	
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient per Leg		50	$^\circ\text{C/W}$	

Note: Pulse test:300us pulse width, duty cycle=2%

Ratings and Characteristics Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

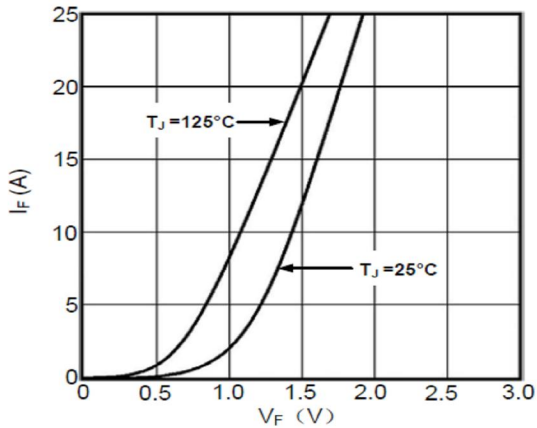


Fig1. Forward Voltage Drop vs Forward Current

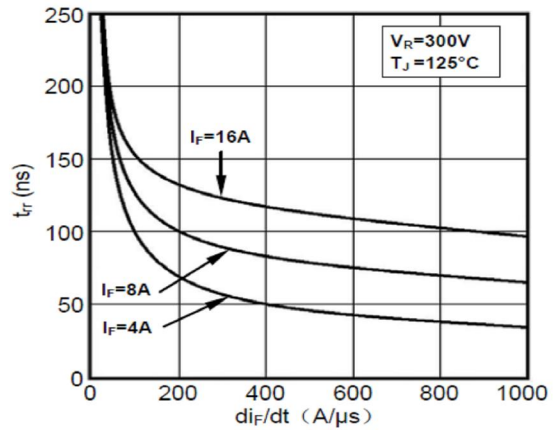


Fig2. Reverse Recovery Time vs di_F/dt

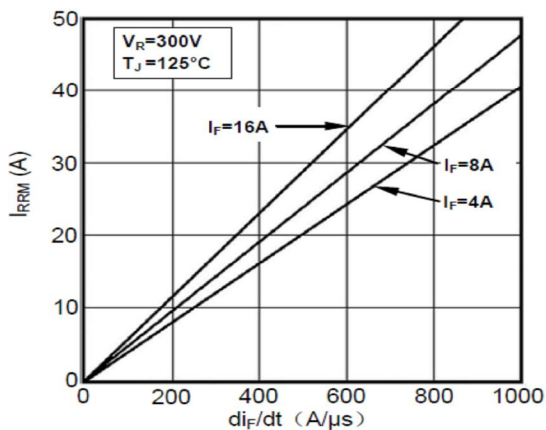


Fig3. Reverse Recovery Current vs di_F/dt

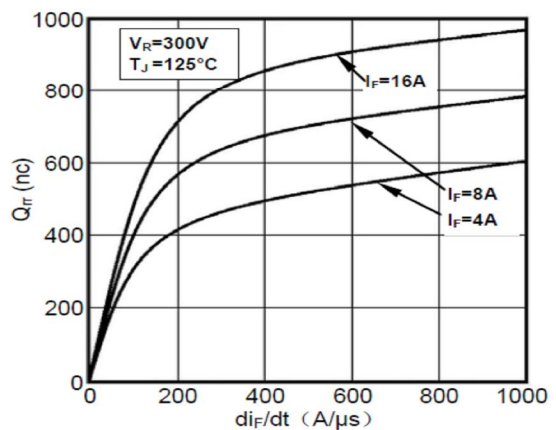


Fig4. Reverse Recovery Charge vs di_F/dt

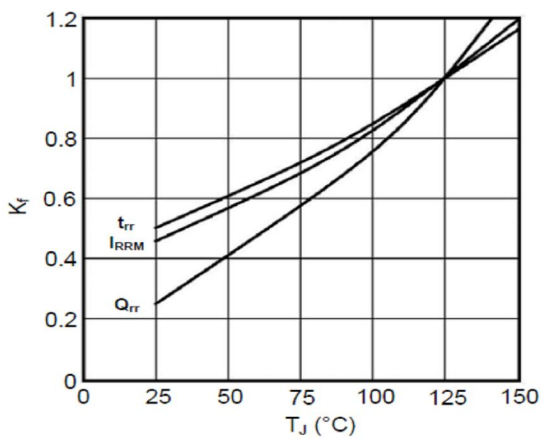


Fig5. Dynamic Parameters vs Junction Temperature

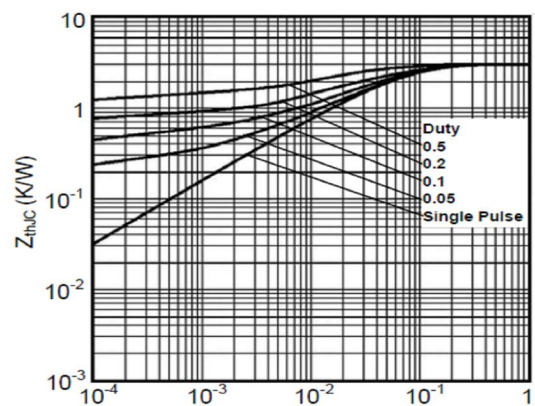


Fig6. Transient Thermal Impedance

Package Outline Dimensions

in millimeters

POWER QFN 5x6

