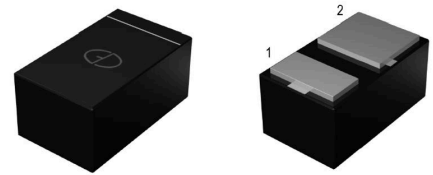


Features

- Low forward voltage drop
- Small DFN1608 package
- Low I_R
- Small current rectification



Package: DFN1608

Applications

- Low voltage rectification
- High efficiency DC-to-DC conversion
- Switch mode power supply
- LED backlight for mobile application
- Low power consumption applications
- Reverse polarity protection



Schematic Diagram

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

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	40	V
Working Peak Reverse Voltage	V_{RWM}		
RMS Reverse Voltage	$V_{R(RMS)}$	28	V
Average Rectified Output Current	I_O	2	A
Non-Repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	I_{FSM}	15	A
Power Dissipation ¹	P_D	0.6	W
Thermal Resistance from Junction to Ambient ¹	$R_{\theta JA}$	167	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	-40 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Voltage	V_{BR}	$I_R=250\mu\text{A}$	40	-	-	V
Reverse Current	I_R	$V_R=20\text{V}$	-	5	20	μA
		$V_R=40\text{V}$	-	10	50	
Forward Voltage	V_F	$I_F=1.0\text{A}$	-	0.54	0.56	V
		$I_F=1.5\text{A}$	-	0.63	0.65	
		$I_F=2.0\text{A}$	-	0.715	0.73	
Diode Capacitance	C_T	$V_R=0\text{V}$, $F=1\text{MHz}$	-	86	-	pF

Note:

1. Device mounted on FR-4 PCB, 2oz. Copper.

Typical Characteristic Curves

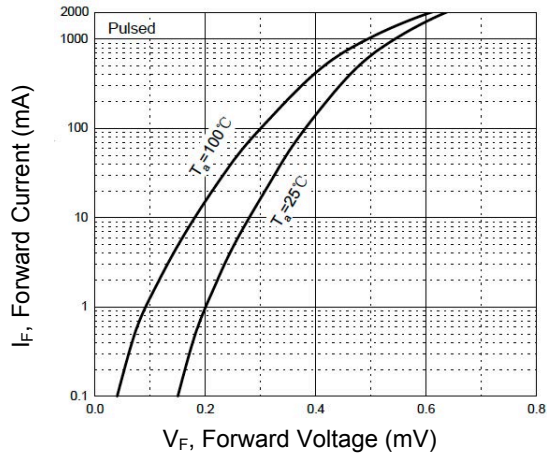


Figure 1. Forward Characteristics

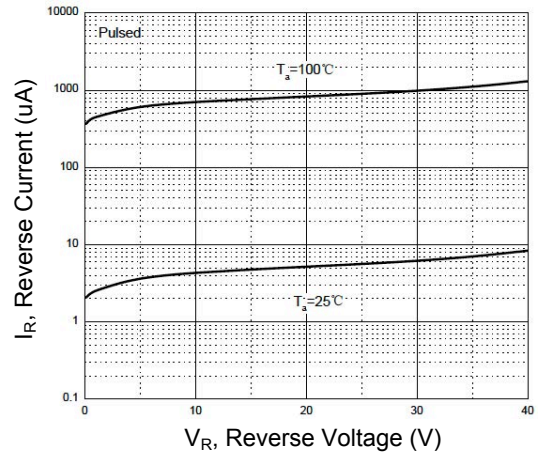


Figure 2. Reverse Characteristics

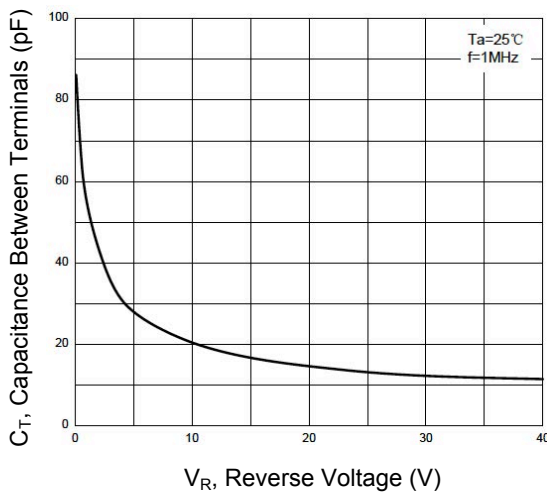


Figure 3. Capacitance Characteristics

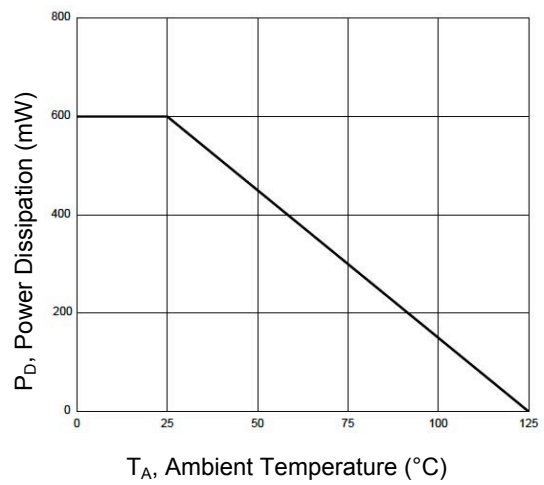
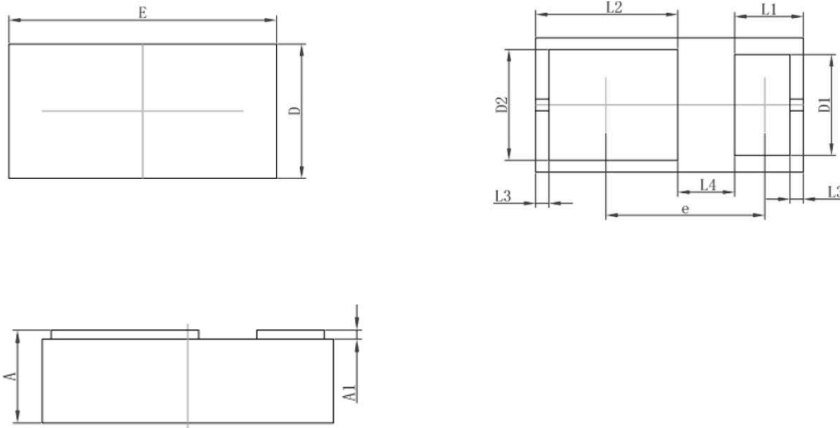


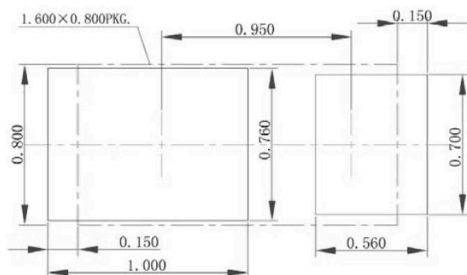
Figure 4. Power Derating Curve

Package Outline Dimensions (DFN1608)



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	0.450	0.550	0.018	0.022
A1	0.010	0.090	0.000	0.004
D	0.750	0.850	0.030	0.033
D1	0.520	0.680	0.020	0.027
D2	0.600	0.760	0.024	0.030
E	1.550	1.650	0.061	0.065
L1	0.410 REF		0.016 REF	
L2	0.850 REF		0.033 REF	
L3	0.080 REF		0.003 REF	
L4	0.340 REF		0.013 REF.	
e	0.900	1.000	0.035	0.039

Recommended Pad Layout



- Note:
1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.050\text{mm}$.
 3. The pad layout is for reference purposes only.