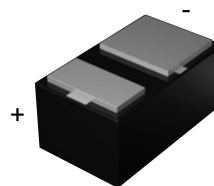


## Features

- Low Forward Voltage Drop
- Small power mold type
- Low  $I_R$
- Small current rectification

## Applications

- Low voltage rectification
- High efficiency DC-to-DC conversion
- Switch mode power supply
- LED backlight for mobile application
- Low power consumption applications
- Ultra high-speed switching
- Reverse polarity Protection



DFN1608



Schematic Diagram

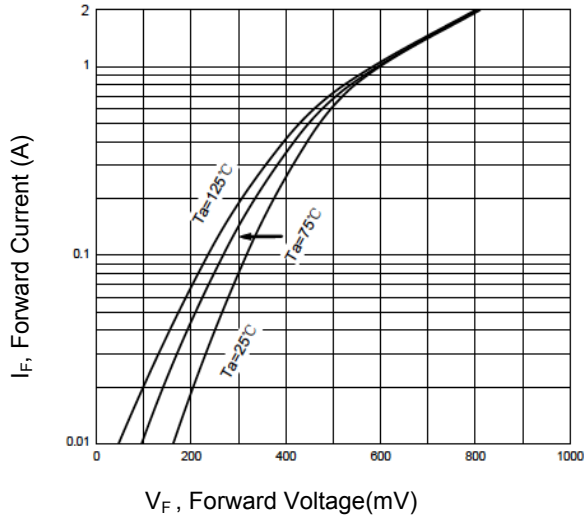
## Absolute Maximum Ratings ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Max.	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	$I_o$	1	A
Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	$I_{FSM}$	5	A
Power Dissipation	$P_D$	150	mW
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	667	$^{\circ}\text{C/W}$
Operating Junction Temperature Range	$T_J$	-40 To +125	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-55 To +150	$^{\circ}\text{C}$

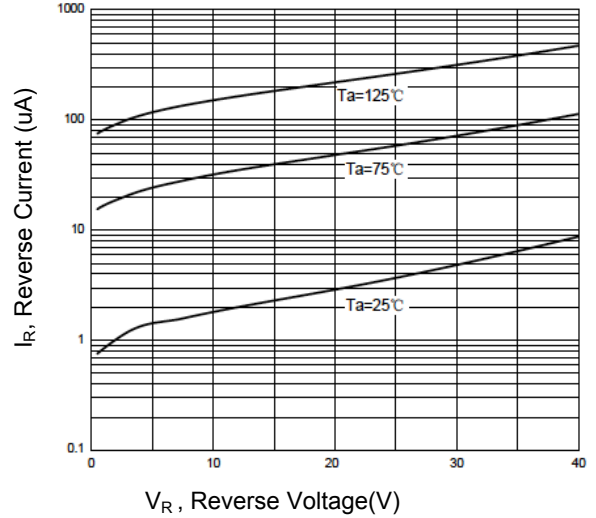
## Electrical Characteristics ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse Voltage	$V_{BR}$	$I_R=10\mu\text{A}$	40	-	-	V
Reverse Current	$I_R$	$V_R=40\text{V}$	-	-	50	$\mu\text{A}$
Forward Voltage	$V_F$	$I_F=0.7\text{A}$	-	-	0.55	V
Diode Capacitance	$C_D$	$V_R=1\text{V}, T_J=25^{\circ}\text{C}, F=1\text{MHz}$	-	50	-	pF
		$V_R=10\text{V}, T_J=25^{\circ}\text{C}, F=1\text{MHz}$	-	20	-	
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=10\text{mA}, R_L=100\Omega, I_R(\text{meas})=1\text{mA}$	-	15	-	nS

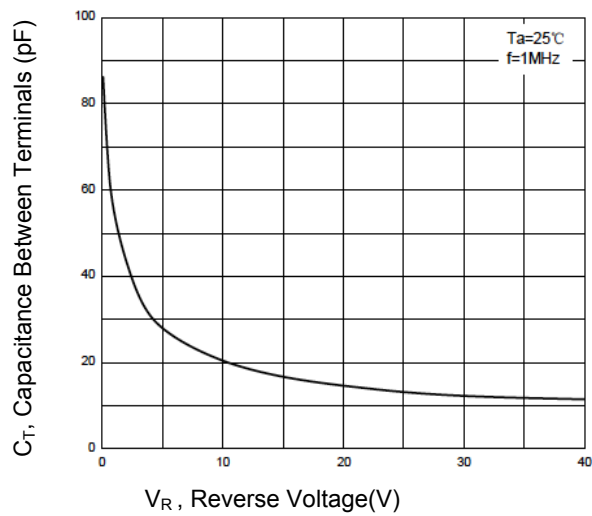
## Typical Characteristics Curves



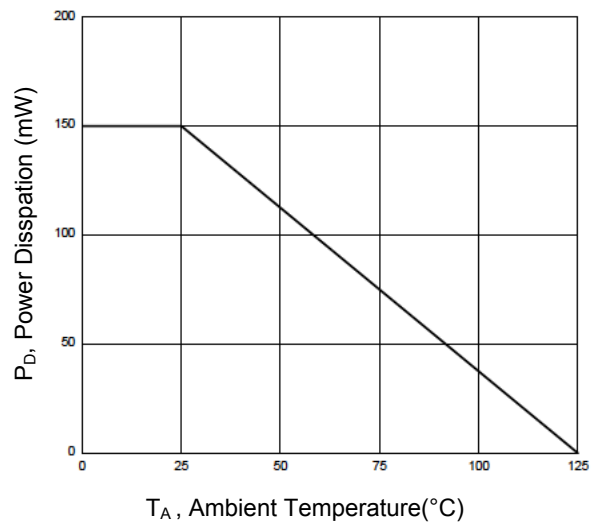
**Figure 1. Forward Characteristics**



**Figure 2. Reverse Characteristics**

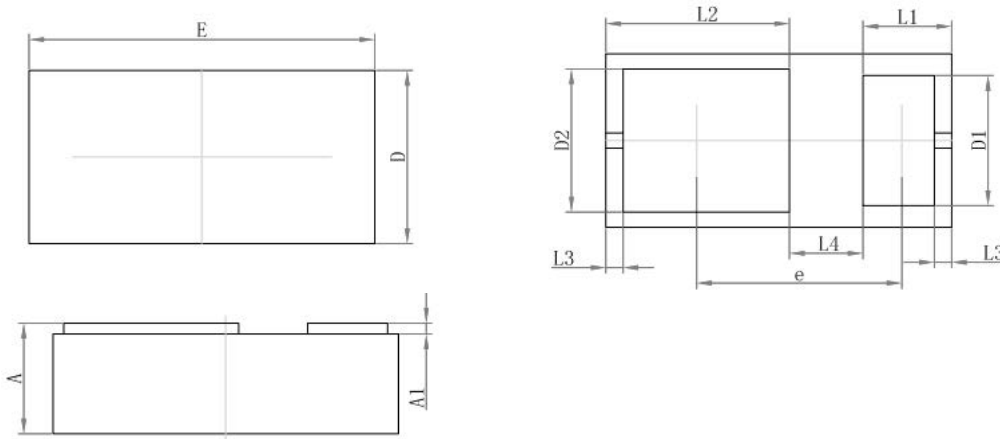


**Figure 3. Capacitance Characteristics**



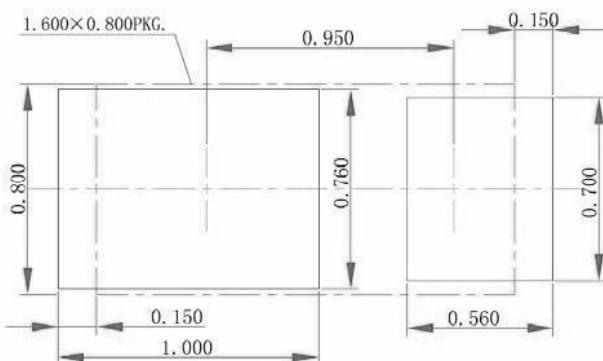
**Figure 4. Power Derating Curve**

## 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:  $\pm 0.050$ mm.
3. The pad layout is for reference purposes only.

## Order Information

Device	Package	Marking	Quantity	HSF
GSBD140	DFN1608	AD	10,000pcs / Reel	ROHS Compliant