

Schottky Barrier Diode

Features

1. High reliability
2. Very low forward voltage
3. Small surface mounting type



Applications

Applications where a very low forward voltage is required

Absolute Maximum Ratings

$T_j=25^{\circ}\text{C}$

Parameter	Test Conditions	Symbol	Value	Unit
Repetitive peak reverse voltage		V_{RRM}	40	V
Forward continuous current	$T_{amb}=25^{\circ}\text{C}$	I_F	350	mA
Repetitive peak forward current	$T_{amb}=25^{\circ}\text{C}$, $t_p \leq 1 \text{ s}$	I_{FRM}	1	A
Surge forward current	$t_p \leq 10\text{ms}$, $T_{amb}=25^{\circ}\text{C}$	I_{FSM}	7.5	A
Power dissipation	$T_{amb}=65^{\circ}\text{C}$	P_{tot}	330	mW
Maximum junction temperature		T_j	125	$^{\circ}\text{C}$
Ambient operating temperature range		T_A	-65~+125	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	-65~+150	$^{\circ}\text{C}$

Maximum Thermal Resistance

$T_j=25^{\circ}\text{C}$

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	on PC board 50mm×50mm×1.6mm	R_{thJA}	300	$^{\circ}\text{C}/\text{W}$

Electrical Characteristics

 $T_j=25^{\circ}\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	$V_{(BR)R}$	$I_R=10\ \mu\text{A}$ (pulsed)	40	-	-	V
Leakage Current Pulse test $t_p<300\ \mu\text{s}$, $\delta<2\%$	I_R	$V_R=10\text{V}$	-	-	2	μA
		$V_R=10\text{V}$, $T_j=60^{\circ}\text{C}$	-	-	15	μA
		$V_R=20\text{V}$	-	-	5	μA
		$V_R=20\text{V}$, $T_j=60^{\circ}\text{C}$	-	-	25	μA
		$V_R=40\text{V}$	-	-	25	μA
		$V_R=40\text{V}$, $T_j=60^{\circ}\text{C}$	-	-	50	μA
Forward voltage Pulse test $t_p<300\ \mu\text{s}$, $\delta<2\%$	V_F	$I_F=0.1\text{mA}$	-	-	0.25	V
		$I_F=1\text{mA}$	-	-	0.30	V
		$I_F=10\text{mA}$	-	-	0.40	V
		$I_F=50\text{mA}$	-	-	0.50	V
		$I_F=200\text{mA}$	-	-	0.75	V
		$I_F=500\text{mA}$	-	-	0.90	V
Capacitance	C_{tot}	$V_R=1\text{V}$, $f=1\text{MHz}$	-	12	-	pF

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

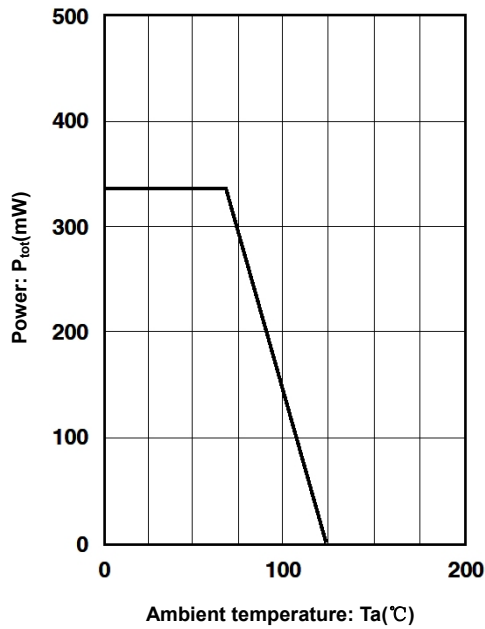


Figure 1. Admissible power dissipation vs. ambient temperature

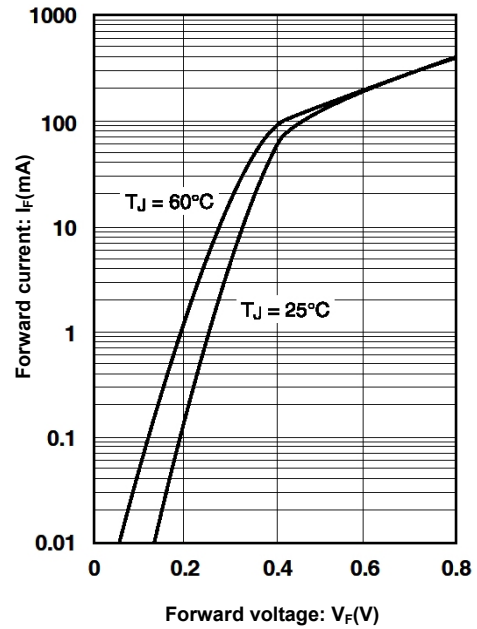


Figure 2. Forward characteristics

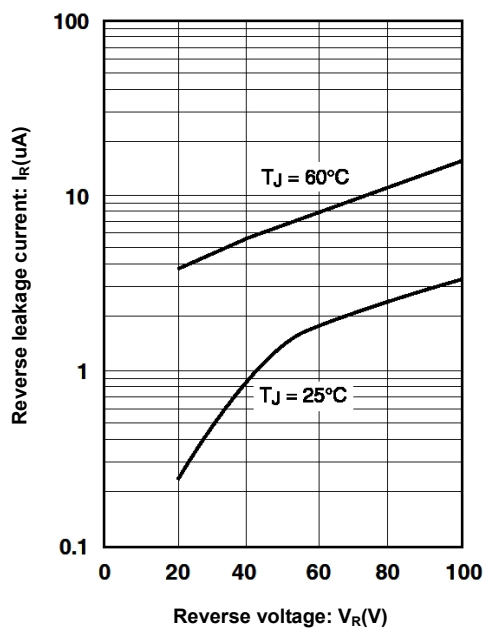
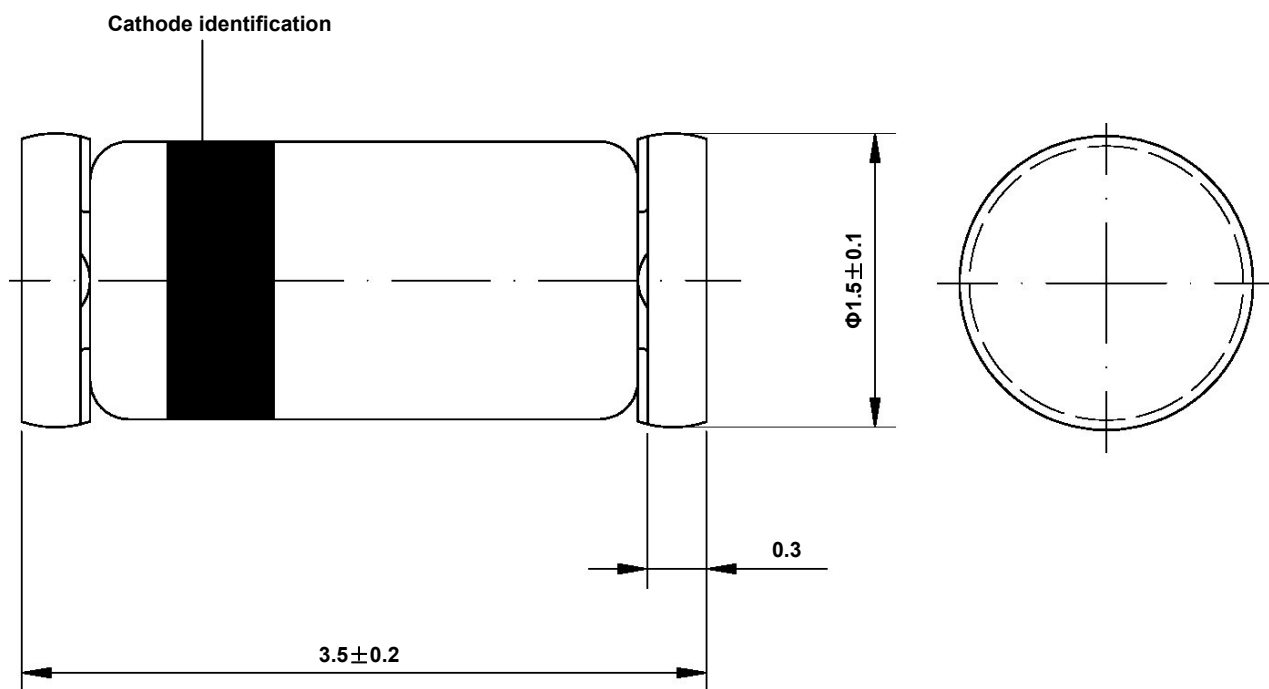


Figure 3. Typical reverse characteristics

Dimensions in mm



Glass Case
Mini Melf / SOD 80
JEDEC DO 213 AA