

Schottky Barrier Diode

Features

1. Small surface mounting type
2. High reliability
3. Low leakage current
4. low forward voltage drop
5. Low capacitance



Applications

Diode for low currents with a low supply voltage

Small battery charger

HF-Detector

Protection circuit

DC/DC converter for notebooks

Protection circuit

Construction

Silicon epitaxial planar

Absolute Maximum Ratings

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

Parameter	Test Conditions	Type	Symbol	Value	Unit
Reverse voltage		BAS81	V_{RRM}	40	V
		BAS82	V_{RRM}	50	V
		BAS83	V_{RRM}	60	V
Repetitive peak forward current			I_{FRM}	150	mA
Peak forward surge current	$t_p=1\text{ s}$		I_{FSM}	500	mA
Forward current			I_F	30	mA
Junction temperature			T_j	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}	320	K/W

Electrical Characteristics

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

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F=0.1\text{mA}$		V_F			0.33	V
	$I_F=1\text{mA}$		V_F			0.41	V
	$I_F=15\text{mA}$		V_F			1	V
Reverse current	$V_R=40\text{V}$	BAS81	I_R			0.2	μA
	$V_R=50\text{V}$	BAS82	I_R			0.2	μA
	$V_R=60\text{V}$	BAS83	I_R			0.2	μA
Diode capacitance	$V_R=1\text{V}$, $f=1\text{MHz}$		C_D			1.6	pF

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

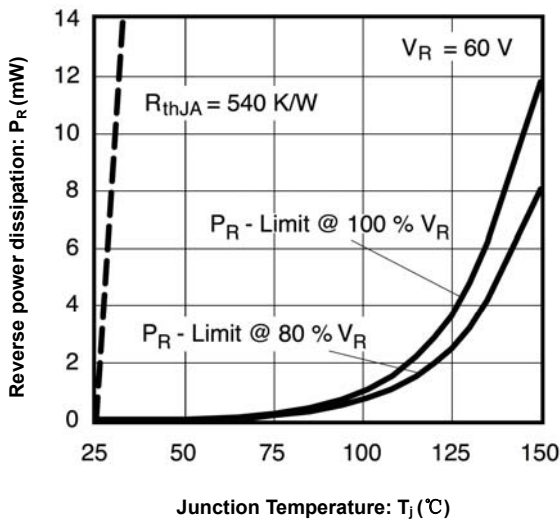


Figure 1. Max. reverse power dissipation vs. junction temperature

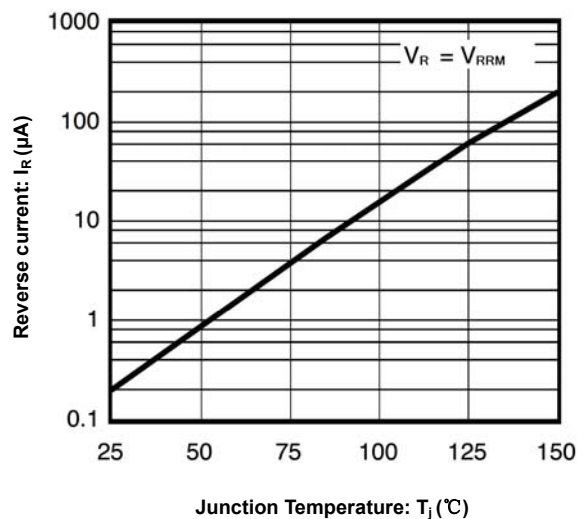


Figure 2. Reverse current vs. junction temperature

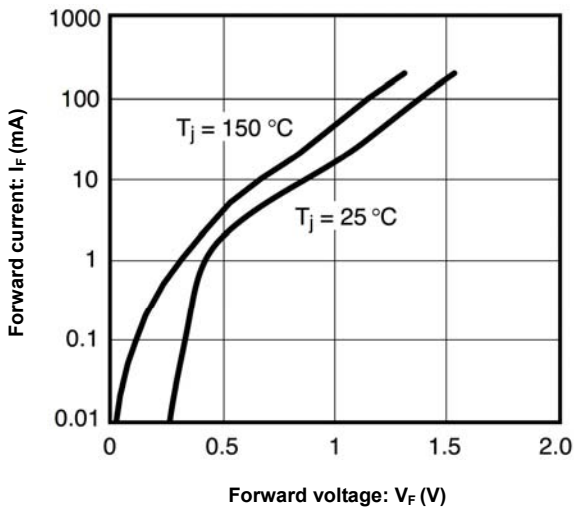


Figure 3. Forward current vs. forward voltage

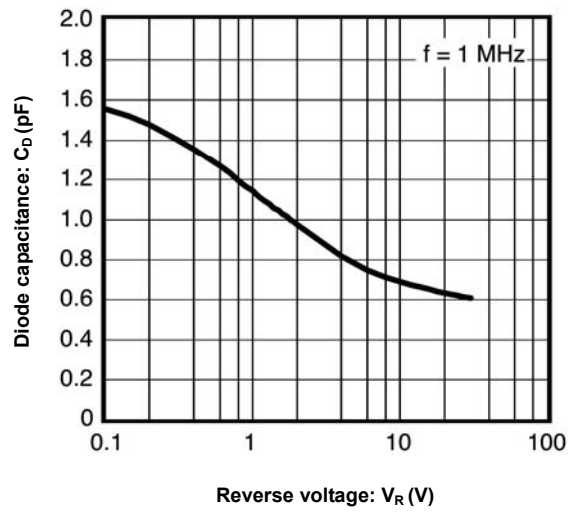
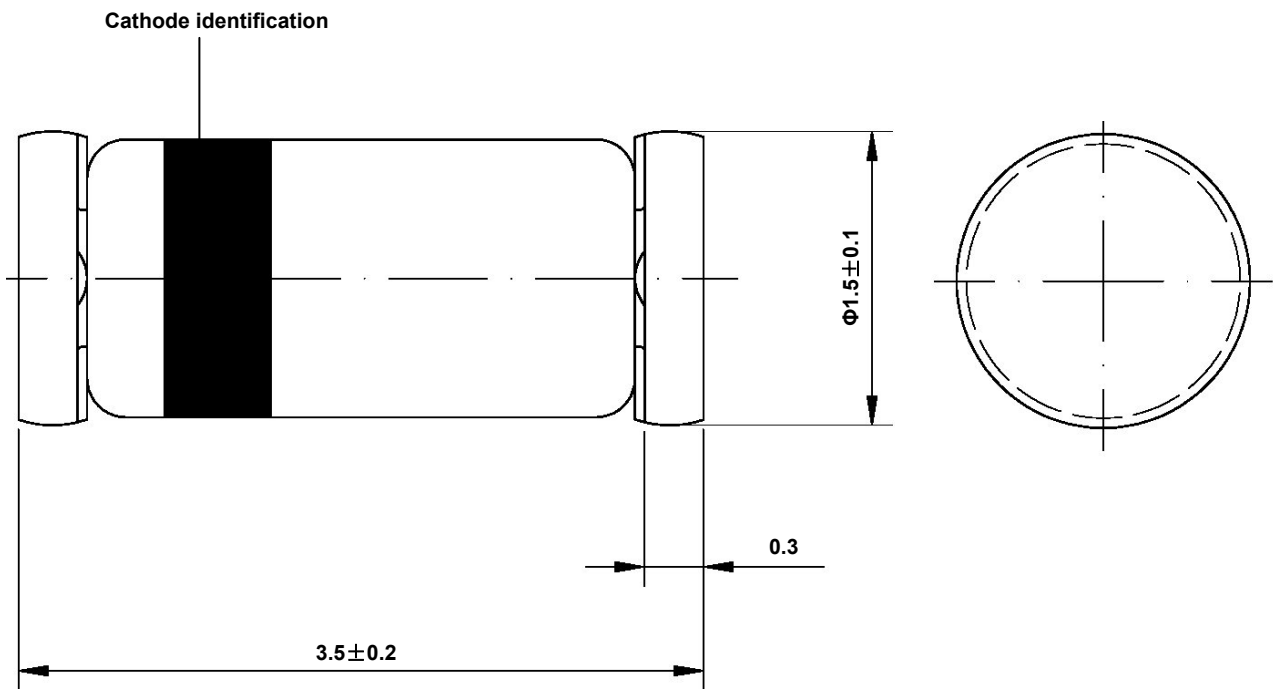


Figure 4. Diode capacitance vs. reverse voltage

Dimensions in mm



Glass Case
 Mini Melf / SOD 80
 JEDEC DO 213 AA