



Small-Signal Diodes

Features

High reliability



Applications

For general purpose

Absolute Maximum Ratings

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

Parameter	Test Conditions	Type	Symbol	Value	Unit
Repetitive peak reverse voltage		BAV100	V_{RRM}	60	V
		BAV101	V_{RRM}	120	V
		BAV102	V_{RRM}	200	V
		BAV103	V_{RRM}	250	V
Reverse voltage		BAV100	V_R	50	V
		BAV101	V_R	100	V
		BAV102	V_R	150	V
		BAV103	V_R	200	V
Peak forward surge current	$t < 1\text{s}, T_j = 25^\circ\text{C}$		I_{FSM}	1	A
Repetitive peak forward current			I_{FRM}	625	mA
Forward DC current	$T_{amb} = 25^\circ\text{C}$		I_F	250	mA
Rectified current (Average)			I_{FAV}	200	mA
Power dissipation	$T_{amb} \leq 25^\circ\text{C}$		P_{tot}	500	mW
Junction temperature			T_j	175	$^\circ\text{C}$
Storage temperature range			T_{stg}	-65~+175	$^\circ\text{C}$

Stresses exceeding maximum ratings may damage the device. Maximum ratings are stress ratings only. Functional operation above the recommended operating conditions is not implied. Extended exposure to stresses above the recommended operating conditions may affect device reliability.

Excel Semiconductor



Electrical Characteristics

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

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 100\text{mA}$		V_F			1.00	V
Reverse current	$V_R = 50\text{V}$	BAV100	I_R			100	nA
	$V_R = 50$ $T_J = 100^\circ\text{C}$	BAV100	I_R			15	μA
	$V_R = 100\text{V}$	BAV101	I_R			100	nA
	$V_R = 100\text{V}$, $T_J = 100^\circ\text{C}$	BAV101	I_R			15	μA
	$V_R = 150\text{V}$	BAV102	I_R			100	nA
	$V_R = 150\text{V}$, $T_J = 100^\circ\text{C}$	BAV102	I_R			15	μA
	$V_R = 200\text{V}$	BAV103	I_R			100	nA
	$V_R = 200\text{V}$, $T_J = 100^\circ\text{C}$	BAV103	I_R			15	μA
Dynamic forward resistance	$I_F = 10\text{mA}$		r_f		5		Ω
Diode capacitance	$V_R = 0$, $f = 1\text{MHz}$		C_D		1.5		pF
Reverse recovery time	$I_F = I_R = 30\text{mA}$, $I_R = 3\text{mA}$, $R_L = 100\Omega$		t_{rr}			50	ns

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

$^\circ\text{C}$ unless otherwise specified)

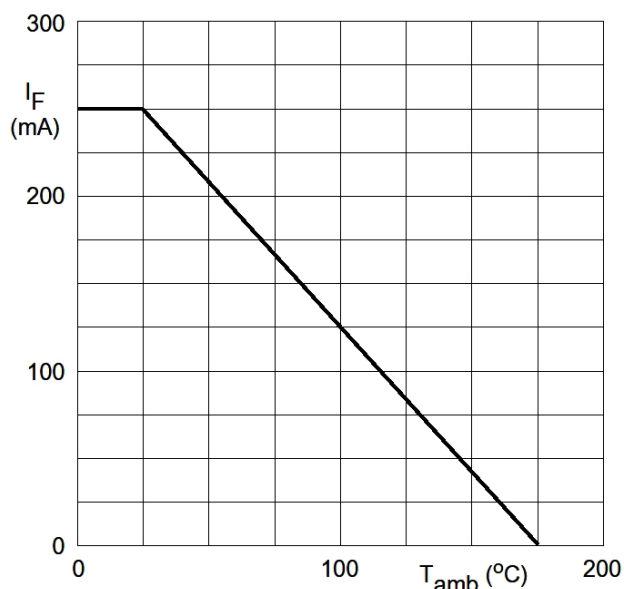


Figure 1. Maximum permissible continuous forward current vs. ambient temperature

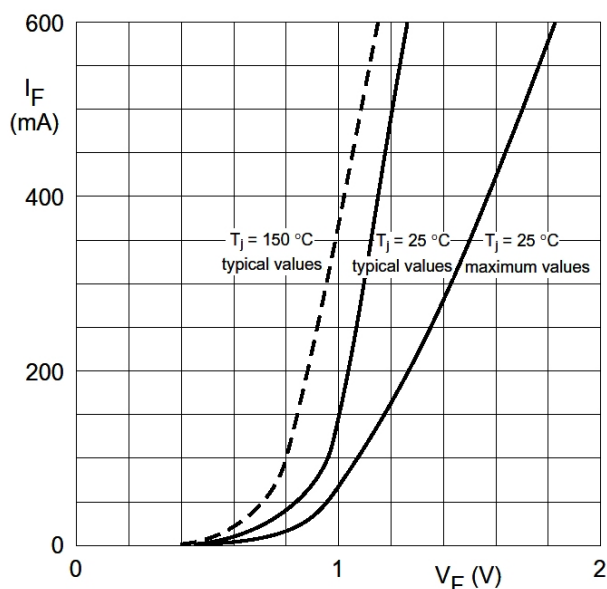


Figure 2. Forward current vs. forward voltage

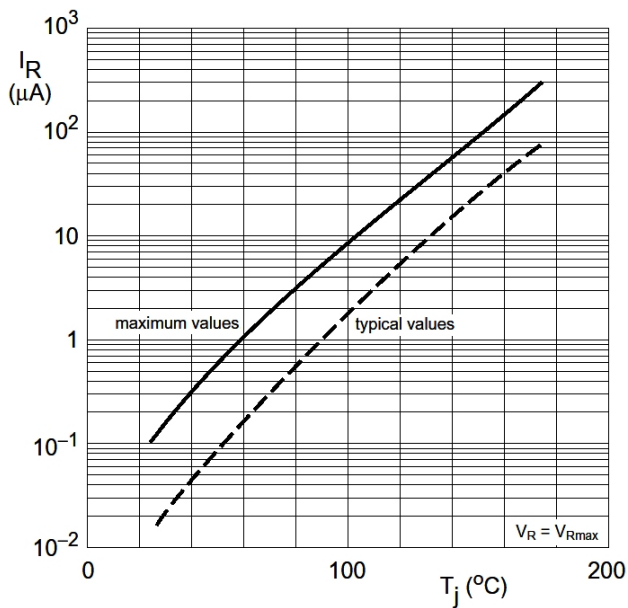


Figure 3. Reverse current vs. junction temperature

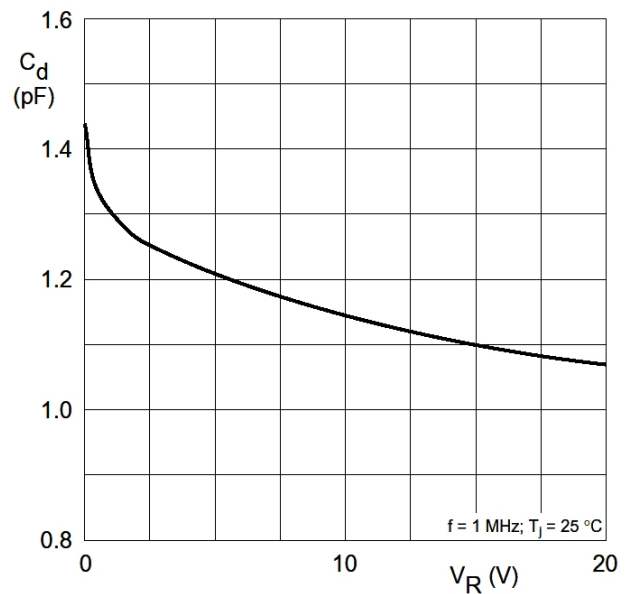


Figure 4. Diode capacitance vs. reverse voltage
(Typical values)

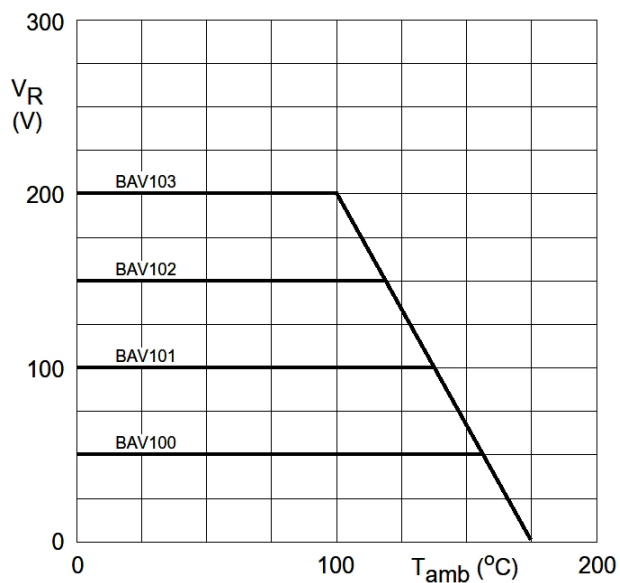
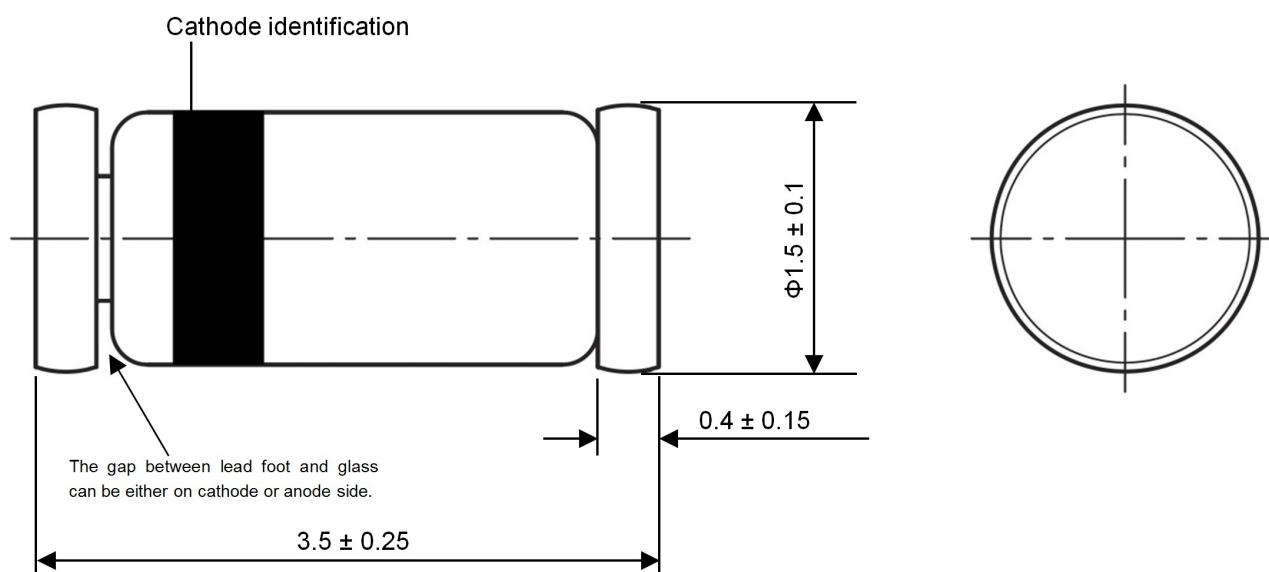


Figure 3. Maximum permissible continuous reverse voltage
vs. ambient temperature



Dimensions in mm



Glass Case
Mini Melf / SOD-80
JEDEC DO-213 AA