

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_{RRM}	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	$^{\circ}\text{C}$

Maximum Thermal Resistance

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

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	on PC board 50mmX50mmX1.6mm	R_{thJA}	500	K/W

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
	$V_R=50\text{V}$	BAV100	I_R			100	nA
	$V_R=50$ $T_j=100^{\circ}\text{C}$	BAV100	I_R			15	μA
Reverse current	$V_R=100\text{V}$	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 ($T_j=25^{\circ}\text{C}$ unless otherwise specified)

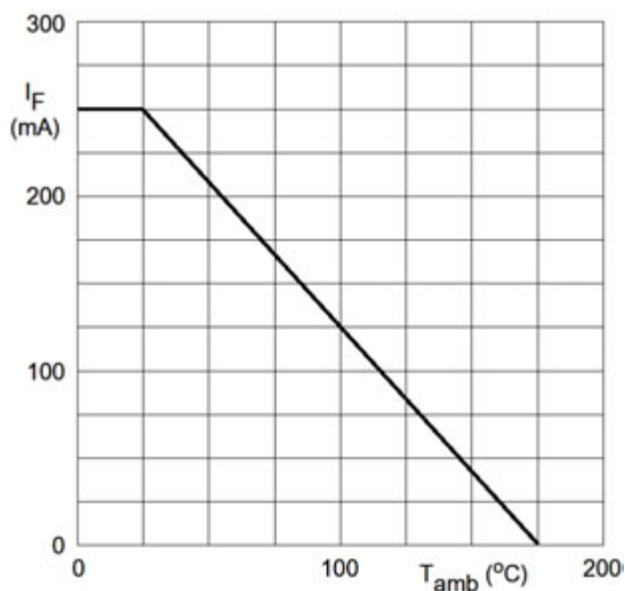


Figure 1. Maximum permissible continuous forward current vs. ambient temperature

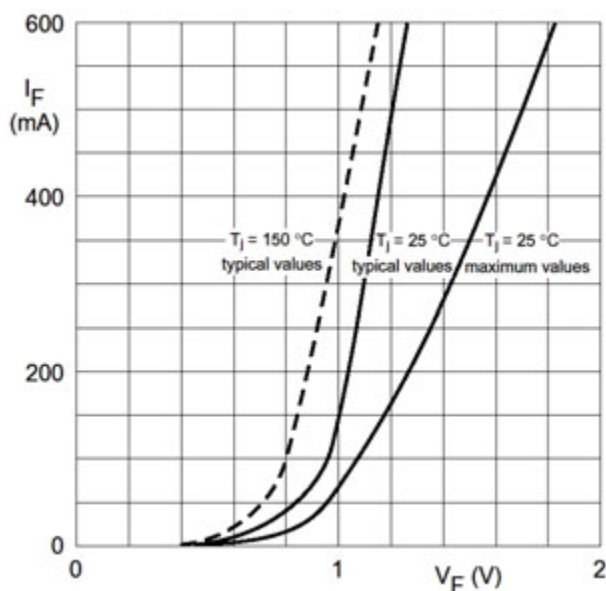


Figure 2. Forward current vs. forward voltage

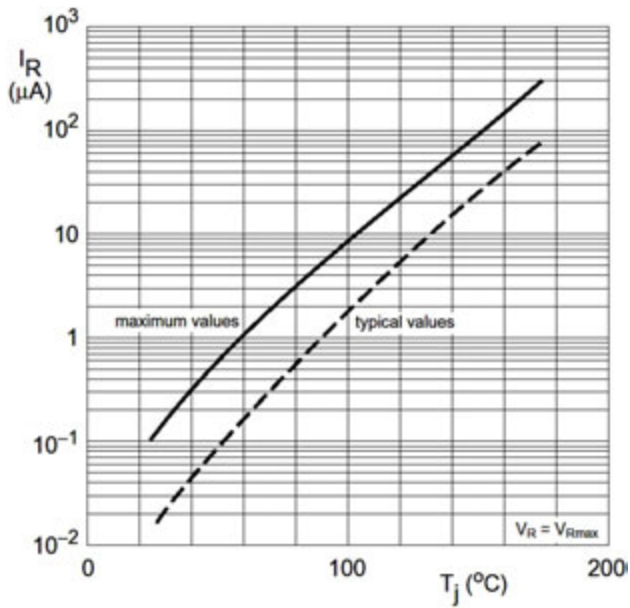


Figure 3. Reverse current vs. junction temperature

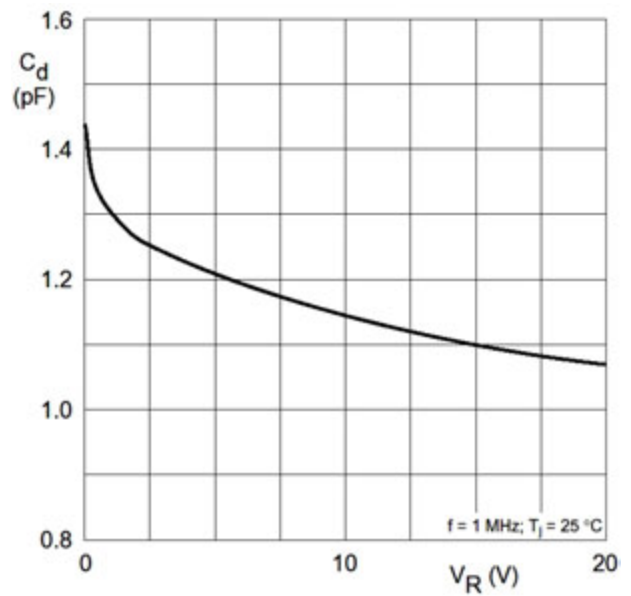


Figure 4. Diode capacitance vs. reverse voltage (Typical values)

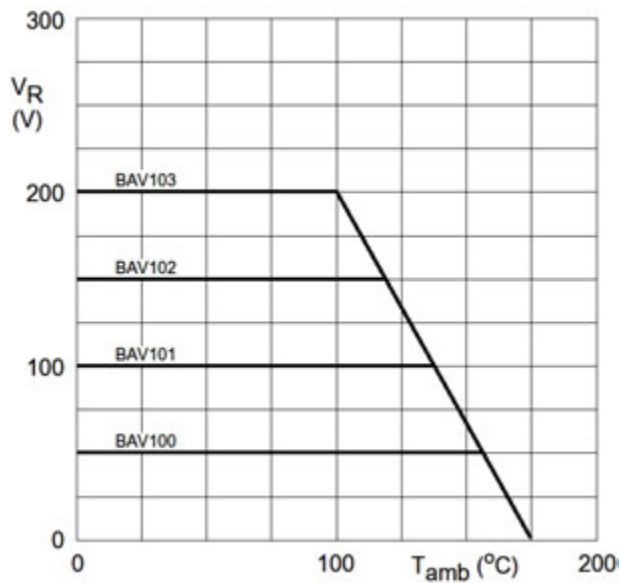
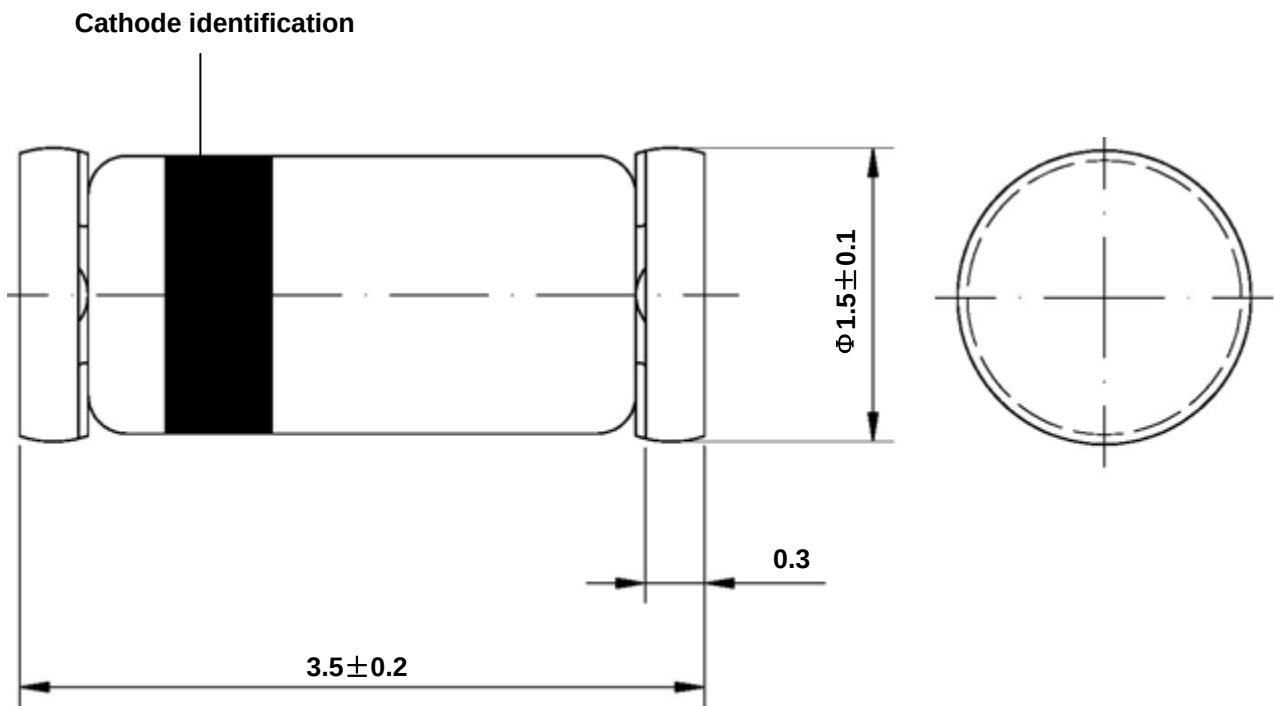


Figure 3. Maximum permissible continuous reverse voltage vs. ambient temperature

Dimensions in mm



Glass Case
Mini Melf / SOD 80
JEDEC DO 213 AA