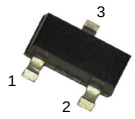
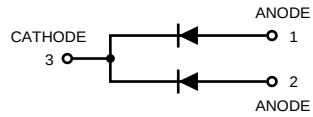
Zowie Technology Corporation

Surface Mount Switching Diode

BAV70WG



SOT-323



MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	70	Vdc
Forward Current	I_F	200	mAdc
Forward Surge Current, t=1us	$I_{FM(surge)}$	4.5	Adc

THERMAL CHARACTERISTICS

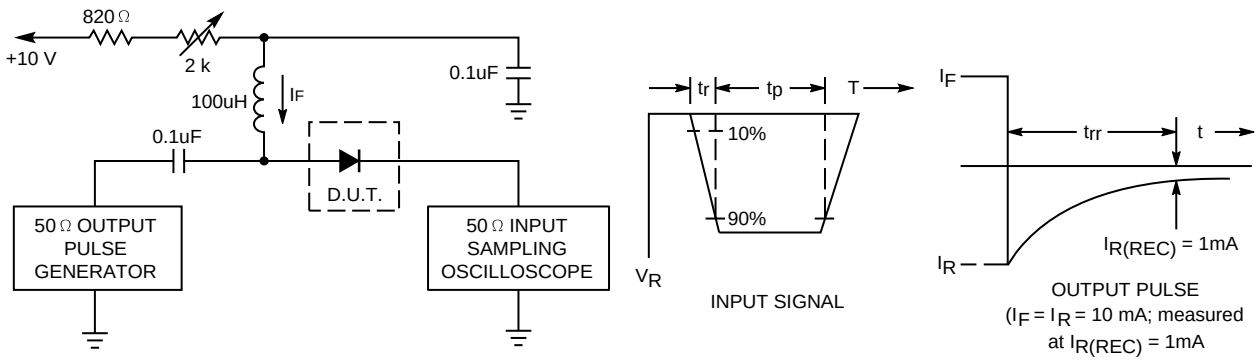
Characteristic	Symbol	Max.	Unit
Total Power Dissipation, Ts=103°C	P_{tot}	250	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-65 to +150	°C
Junction Soldering Point(1)	$R_{\theta JS}$	≦190	K / W

(1) For calculation of $R_{\theta JS}$ Please refer to Application Thermal Resistance.

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted) (EACH DIODE)

Characteristic	Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS				
Reverse Breakdown Voltage ($I_{(BR)}$ = 100uAdc)	$V_{(BR)}$	70	-	Vdc
Reverse Voltage Leakage Current (V_R=25Vdc, T_J=150°C) (V_R=70Vdc) (V_R=70Vdc, T_J=150°C)	I_R	- - -	30 2.5 50	uAdc
Diode Capacitance (V_R=0, f = 1.0 MHz)	C_D	-	1.5	pF
Forward Voltage (I_F = 1.0 mAdc) (I_F = 10 mAdc) (I_F = 50 mAdc) (I_F = 150 mAdc)	V_F	- - - -	715 855 1000 1250	mVdc
Reverse Recovery Time (I_F = I_R = 10 mAdc, $I_{R(REC)}$ = 1.0 mAdc) (Figure 1) R_L = 100 Ω	t_{rr}	-	6.0	nS

FIGURE 1. RECOVERY TIME EQUIVALENT TEST CIRCUIT



Notes: 1. A 2.0kΩ variable resistor adjusted for a Forward Current (I_F) of 10mA.
2. Input pulse is adjusted so $I_{R(peak)}$ is equal to 10mA.
3. $t_p \gg t_{rr}$

FIGURE 2. FORWARD VOLTAGE

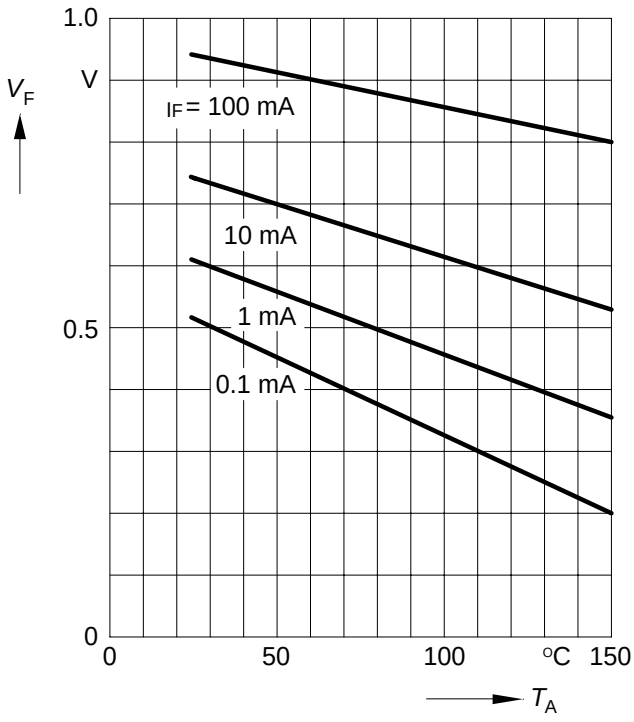


FIGURE 3. REVERSE CURRENT

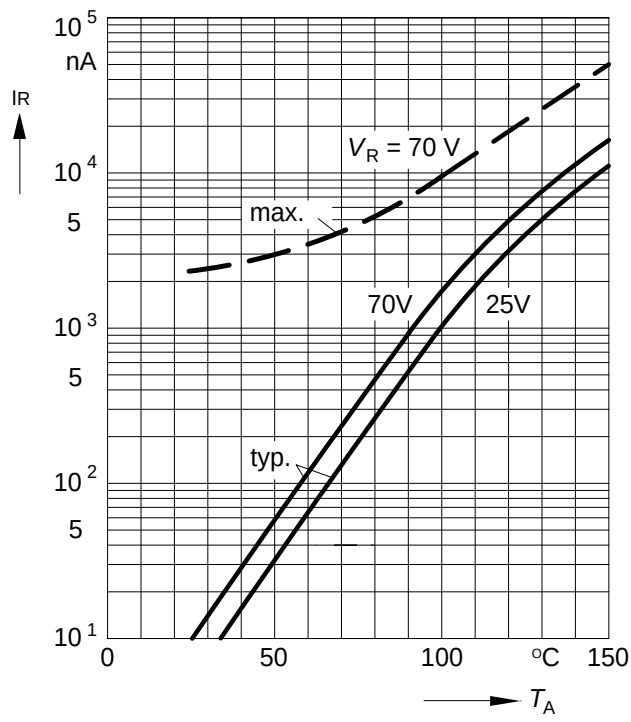


FIGURE 4. FORWARD CURRENT IF=f(Ts)

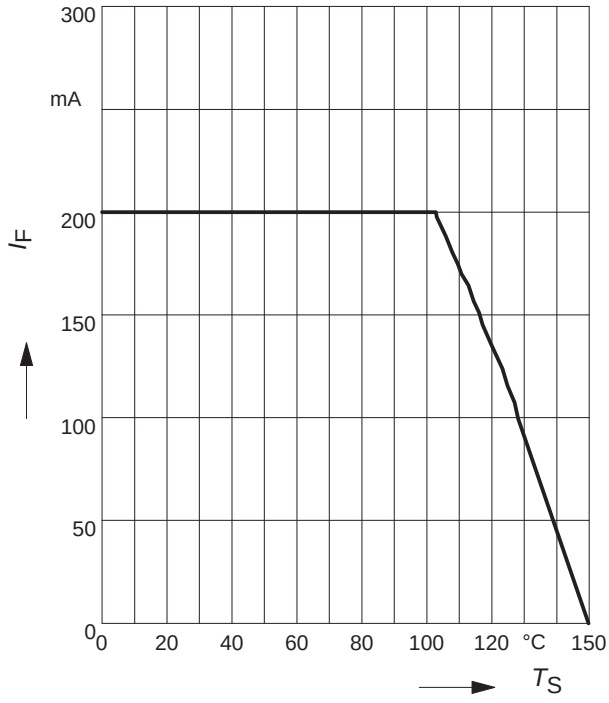


FIGURE 5. FORWARD CURRENT IF=f(VF)
Ta=25°C

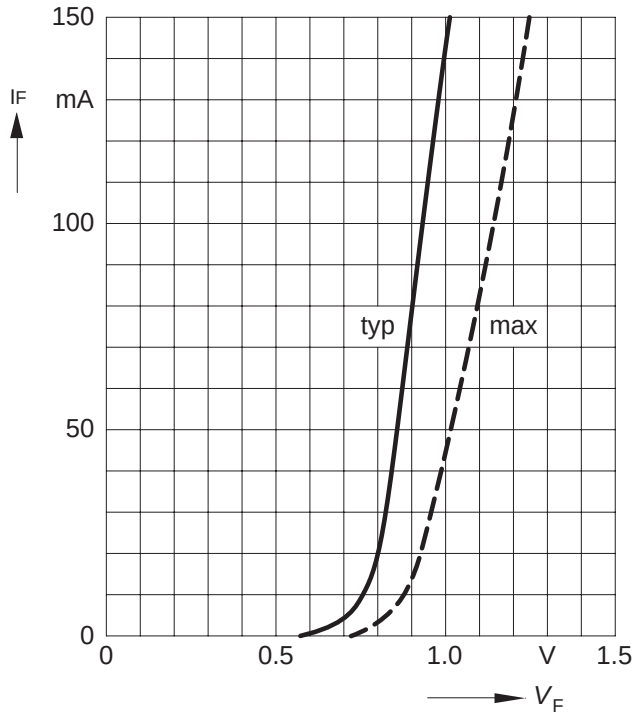


FIGURE 6. PERMISSIBLE PULSE LOAD $R_{\theta JS}=f(t_p)$

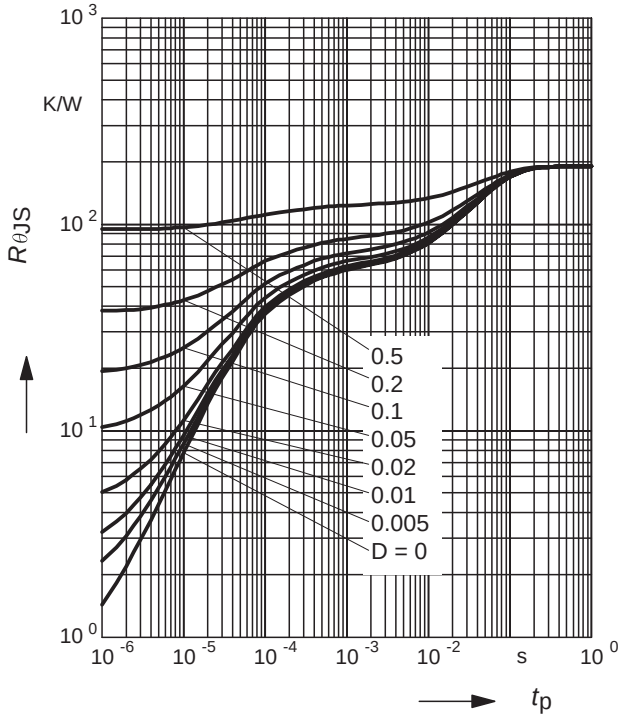


FIGURE 7. PERMISSIBLE PULSE LOAD
$I_{Fmax}/I_{FDC}=f(t_p)$

