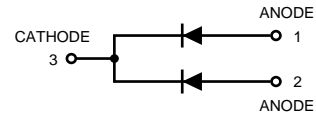
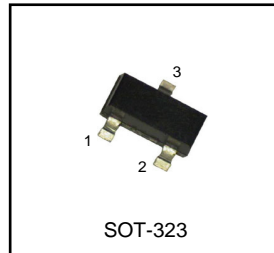


## Surface Mount Switching Diode

**BAV70WG**



### MAXIMUM RATINGS

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

### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max.	Unit
Total Power Dissipation, $T_s=103^\circ\text{C}$	$P_{tot}$	250	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-65 to +150	$^\circ\text{C}$
Junction Soldering Point <sup>(1)</sup>	$R\theta_{JS}$	190	K / W

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

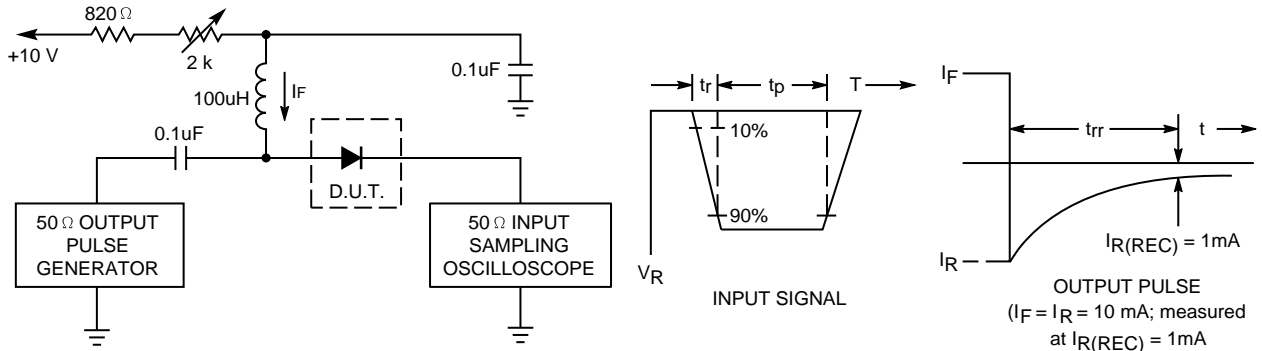
### ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ unless otherwise noted) (EACH DIODE)

Characteristic	Symbol	Min.	Max.	Unit
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### OFF CHARACTERISTICS

Reverse Breakdown Voltage ( $I_{R(BR)} = 100\mu\text{Adc}$ )	$V_{(BR)}$	70	-	Vdc
Reverse Voltage Leakage Current ( $V_R=25\text{Vdc}$ , $T_J=150^\circ\text{C}$ ) ( $V_R=70\text{Vdc}$ ) ( $V_R=70\text{Vdc}$ , $T_J=150^\circ\text{C}$ )	$I_R$	- - -	30 2.5 50	$\mu\text{Adc}$
Diode Capacitance ( $V_R=0$ , $f = 1.0\text{ MHz}$ )	$C_D$	-	1.5	pF
Forward Voltage ( $I_F = 1.0\text{ mAdc}$ ) ( $I_F = 10\text{ mAdc}$ ) ( $I_F = 50\text{ mAdc}$ ) ( $I_F = 150\text{ mAdc}$ )	$V_F$	- - - -	715 855 1000 1250	mVdc
Reverse Recovery Time ( $I_F = I_R = 10\text{ mAdc}$ , $I_{R(REC)} = 1.0\text{ mAdc}$ ) ( Figure 1 ) $R_L = 100\ \Omega$	$t_{rr}$	-	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

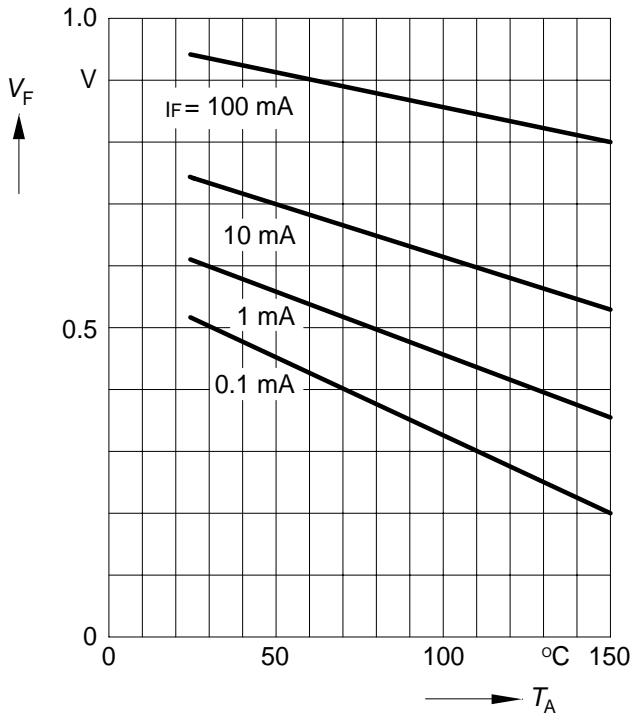


FIGURE 3. REVERSE CURRENT

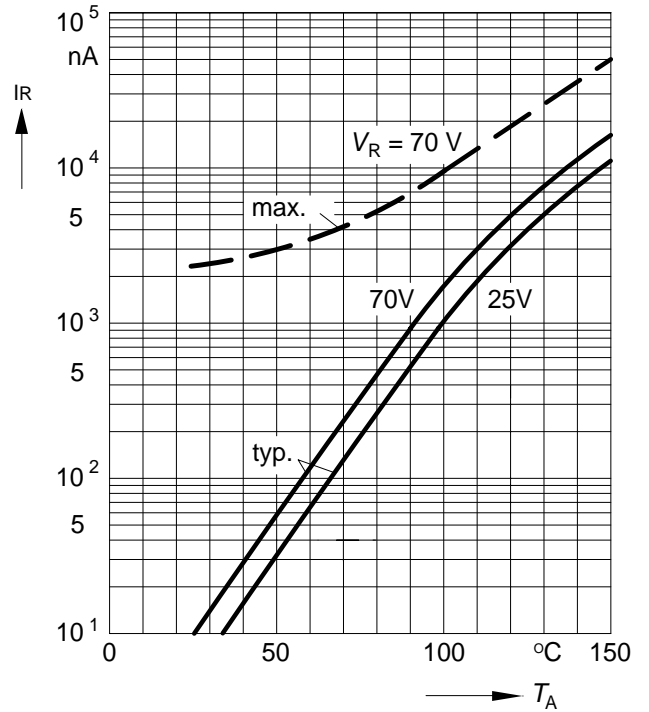


FIGURE 4. FORWARD CURRENT  $I_F=f(T_S)$

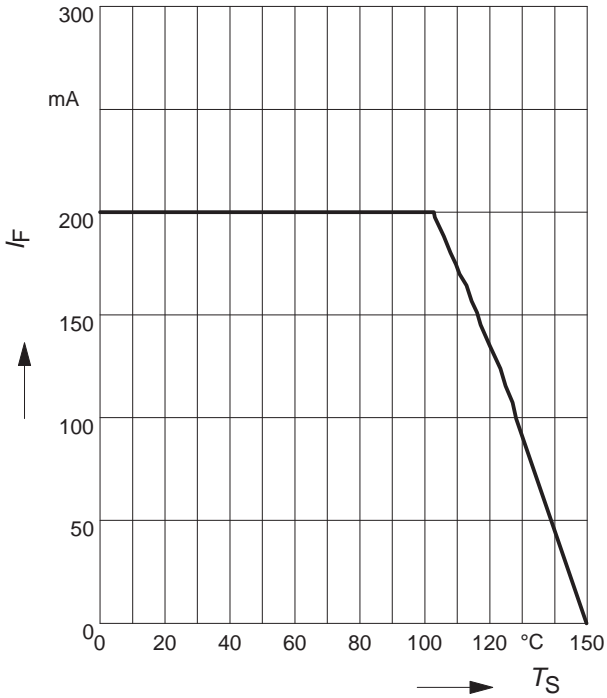


FIGURE 5. FORWARD CURRENT  $I_F=f(V_F)$   
 $T_a=25^\circ\text{C}$

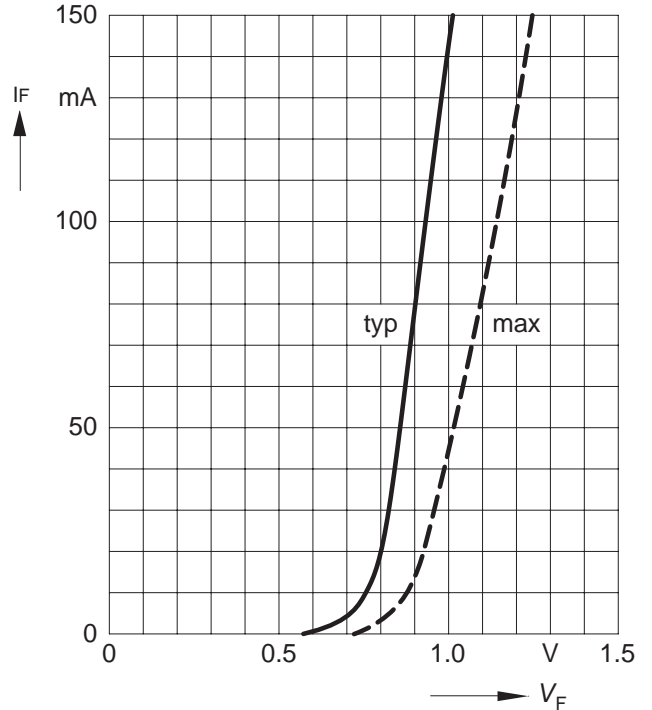


FIGURE 6. PERMISSIBLE PULSE LOAD  $R_{\theta JS}=f(t_p)$

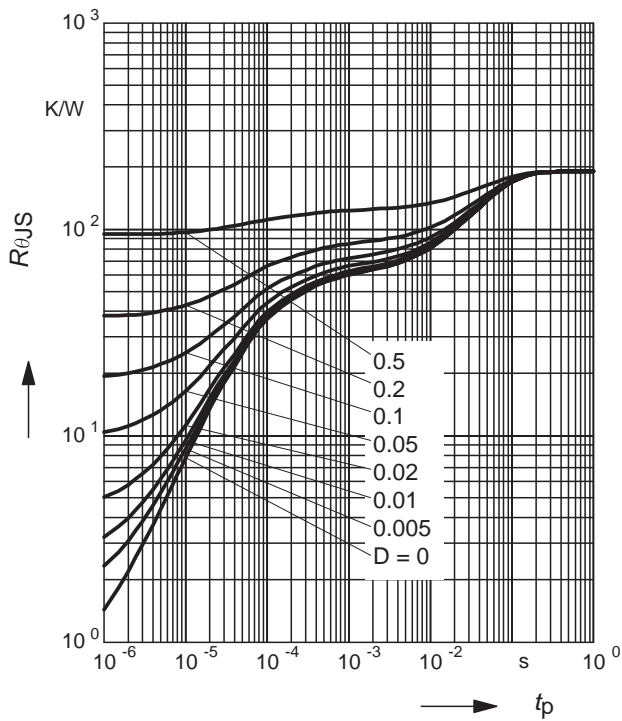


FIGURE 7. PERMISSIBLE PULSE LOAD  
 $I_{Fmax}/I_{FDC}=f(t_p)$

