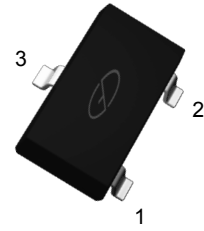


Features

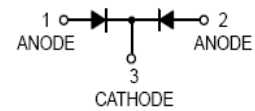
- Low forward voltage drop
- Fast switching
- Ultra Small Surface Mount Package



SOT-523

Applications

- High-speed switching
- Portable, hand-held devices



Schematic Diagram

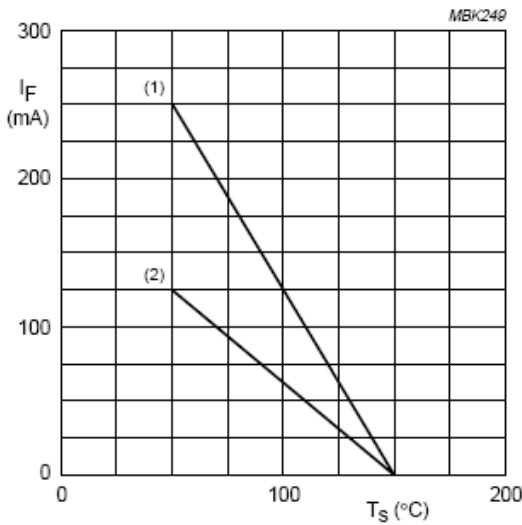
Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	85	V
Continuous Reverse Voltage	V_R	75	V
Forward Continuous Current Single diode loaded Both diodes loaded	I_{FM}	150 75	mA
Repetitive Peak Forward Current	I_{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current @ $t=1.0\mu\text{s}$ @ $t=1.0\text{ms}$ @ $t=1.0\text{s}$	I_{FSM}	4 1 0.5	A
Total Power Dissipation $T_s=90^{\circ}\text{C}$; One Diode Loaded	P_{tot}	170	mW
Junction and Storage Temperature	T_J, T_{STG}	-65 to +150	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

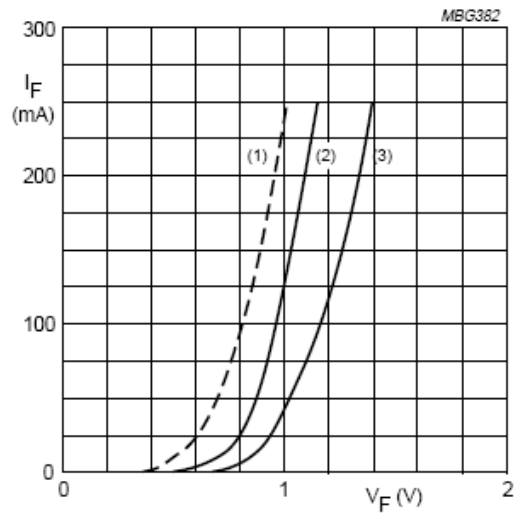
Parameter	Symbol	ConditionsTest	Max	Unit
Leakage Current	I_R	$V_R=25\text{V}$	30	nA
		$V_R=75\text{V}$	2	μA
		$V_R=25\text{V}, T_J=150^\circ\text{C}$	60	μA
		$V_R=75\text{V}, T_J=150^\circ\text{C}$	100	μA
Forward Voltage	V_F	$I_F=1\text{mA}$	0.715	V
		$I_F=10\text{mA}$	0.855	
		$I_F=50\text{mA}$	1	
		$I_F=150\text{mA}$	1.25	
Diode Capacitance	C_d	$V_R=0\text{V}, f=1\text{MHz}$	1.5	pF
Forward Recovery Voltage	V_{ff}	$I_F=10\text{mA}, t_r=20\text{ns}$	1.75	V
Reverse Recovery Time	t_{rr}	$I_F=I_R=10\text{mA}, I_{rr}=0.1 \cdot I_R, R_L=100\Omega$	4	ns

Typical Electrical Characteristic Curves



- (1) One diode loaded.
- (2) Both diodes loaded.

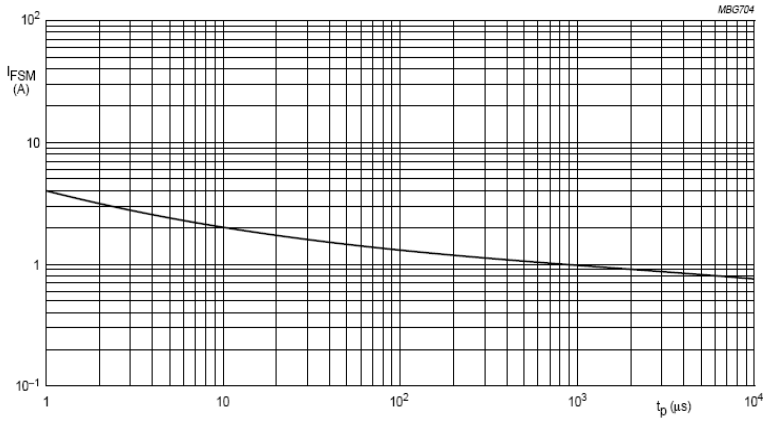
Figure 1. Maximum Continuous Forward Current per Diode



- (1) $T_j = 150^\circ\text{C}$; typical values.
- (2) $T_j = 25^\circ\text{C}$; typical values.
- (3) $T_j = 25^\circ\text{C}$; maximum values.

Figure 2. Forward Current

Typical Electrical Characteristic Curves



Based on square wave currents.
 $T_j = 25\text{ }^\circ\text{C}$ prior to surge.

Figure 3. Maximum Non-Repetitive Peak Forward Current

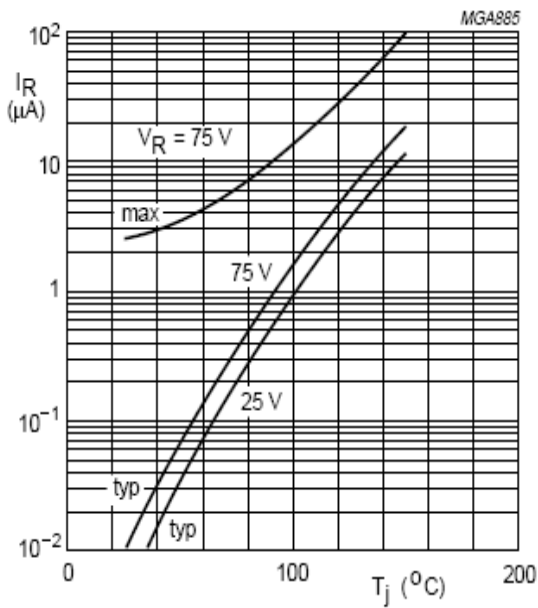
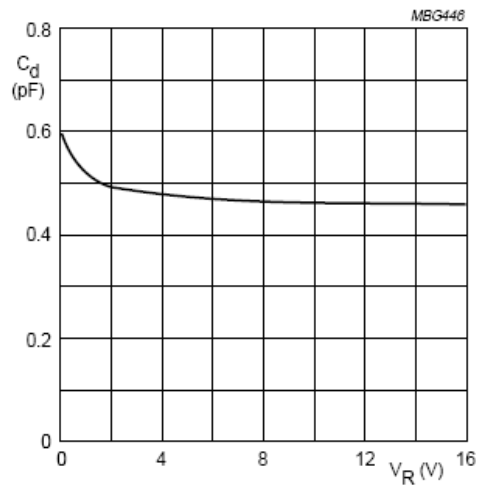


Figure 4. Reverse Current

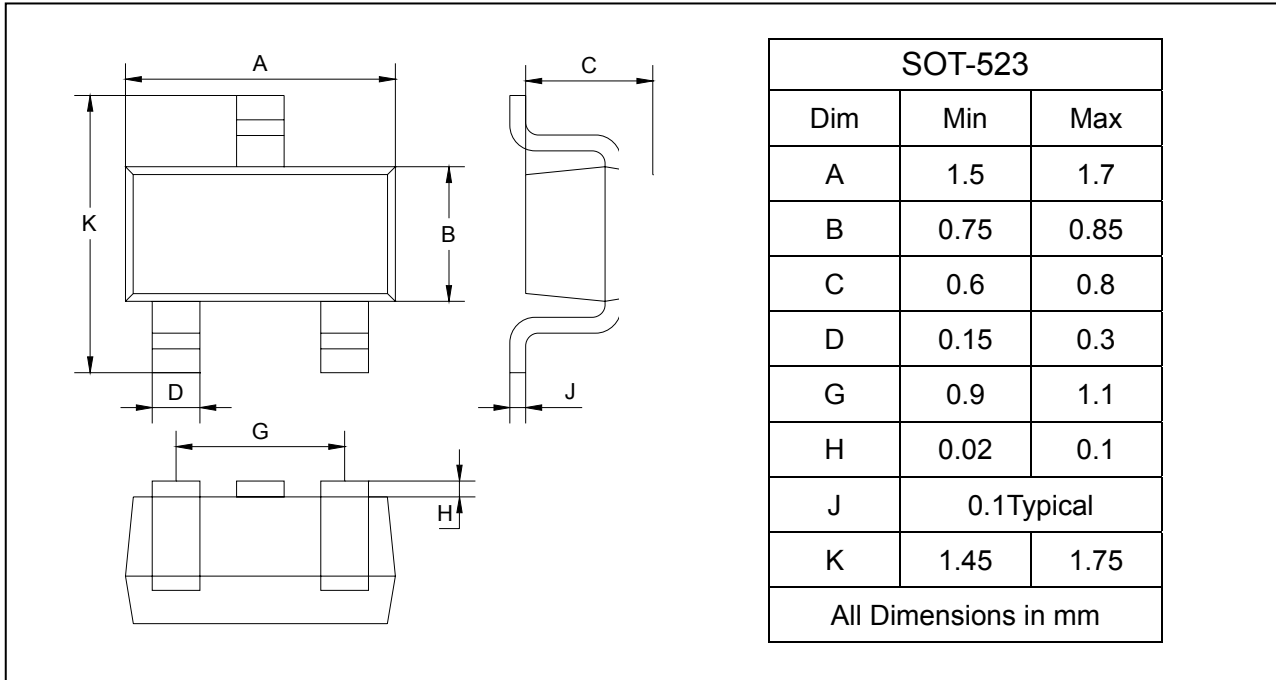


$f = 1\text{ MHz}$; $T_j = 25\text{ }^\circ\text{C}$.

Figure 5. Diode Capacitance

Package Outline Dimensions

SOT-523



Marking and Ordering Information

Device	Package	Carrier	Quantity	Marking
GSBAV70T	SOT-523	Tape & Reel	3,000pcs / Reel	JJ