

### Surface Mount Switching Diodes

 Lead(Pb)-Free

#### Features:

- \* Four types of packaging are available
- \* High speed. (trr=1.5ns Typ.)
- \* Suitable for high packing density layout
- \* High reliability.

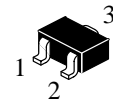
#### Mechanical Data:

- \* Terminals: Solderable per MIL-STD-202, Method 208
- \* Polarity: See Diagrams Page.2
- \* Marking: See Diagrams Page.2
- \* Weight: 0.002 grams (approx)

**SWITCHING DIODES**

**100 mAMPERES**

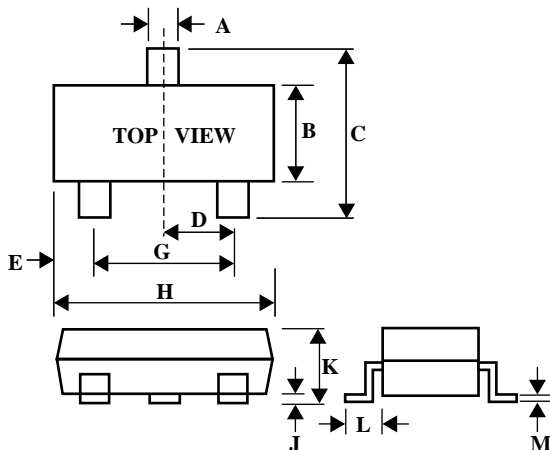
**80 VOLTS**



**SOT-523(SC-75)**

### SOT-523 Outline Dimensions

Unit:mm



SOT-523		
Dim	Min	Max
A	0.30	0.50
B	0.70	0.90
C	1.45	1.75
D	-	0.50
E	0.15	0.40
G	0.80	1.00
H	1.40	1.80
J	0.00	0.10
K	0.70	1.00
L	0.37	0.48
M	0.10	0.25

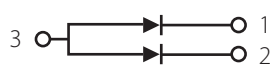
**Maximum Ratings and Electrical Characteristics, Single Diode @ $T_A=25^{\circ}\text{C}$** 

Parameter	Symbol	Limits	Unit
Peak reverse voltage	$V_{RM}$	80	V
DC reverse voltage	$V_R$	80	V
Maximum (peak) forward current	$I_{FM}$	300	mA
Average forward current	$I_O$	100	mA
Power dissipation	$P_D$	150	mW
Junction temperature	$T_j$	150	$^{\circ}\text{C}$
Storage temperature	$T_{stg}$	-55-150	$^{\circ}\text{C}$

**ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^{\circ}\text{C}$  unless otherwise specified)**

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Reverse breakdown voltage	$V_{(BR)}$	$I_R=100\mu\text{A}$	80		V
Reverse voltage leakage current	$I_R$	$V_R=70\text{V}$		0.1	$\mu\text{A}$
Forward voltage	$V_F$	$I_F=100\text{mA}$		1.2	V
Diode capacitance	$C_D$	$V_R=0, f=1\text{MHz}$		3.5	pF
Reverse recovery time	$t_{rr}$	$V_R=6\text{V}, I_F=I_R=5\text{mA}$		4	ns

**Device Marking**

Item	Marking	Equivalent Circuit diagram
WAP222	P	

## Electrical Characteristic curves ( $T_A=25^\circ\text{C}$ )

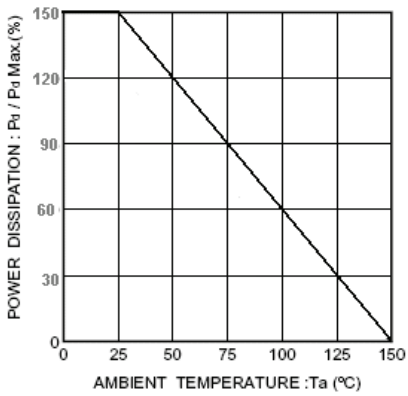


Fig.1 Power attenuation curve

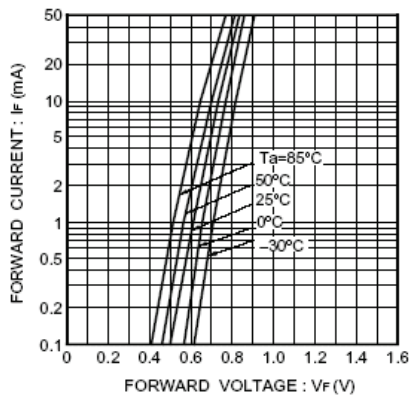


Fig.2 Forward characteristics (P Type)

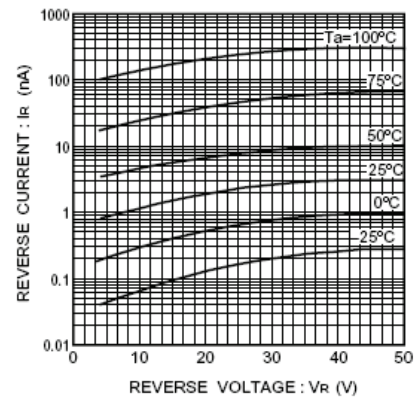


Fig.3 Reverse characteristics (P Type)

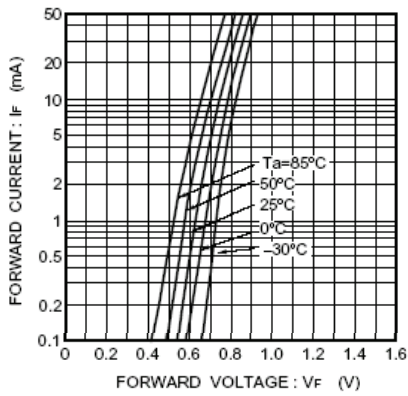


Fig.4 Forward characteristics (N Type)

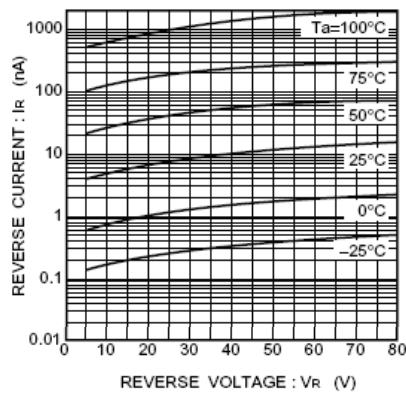


Fig.5 Reverse characteristics (N Type)

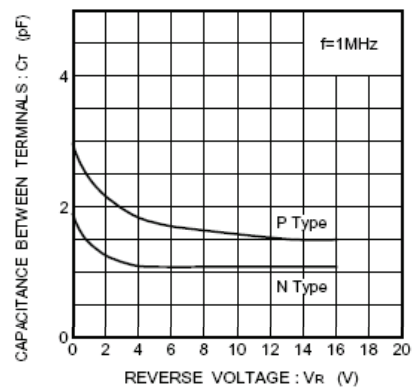


Fig.6 Capacitance between terminals characteristics

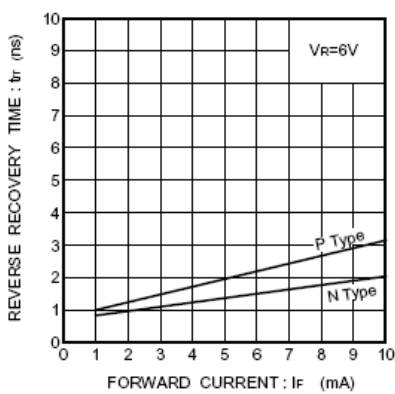


Fig.7 Reverse recovery time

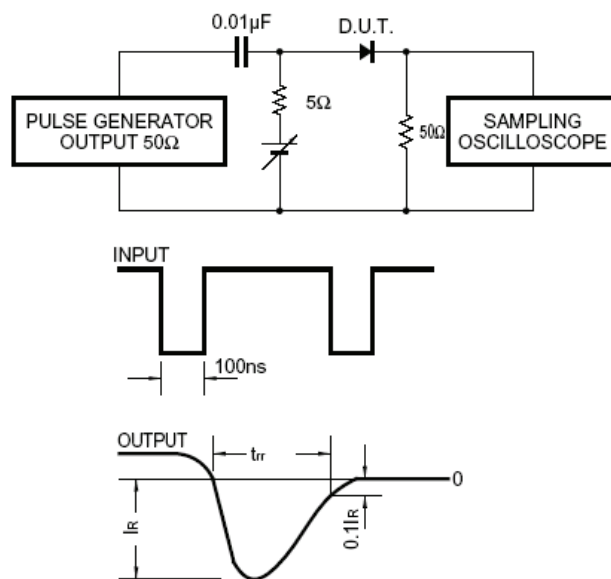


Fig.8 Reverse recovery time ( $t_r$ ) measurement circuit