

### Surface Mount Switching Diode

**(Pb)** Lead(Pb)-Free

**Features:**

- \*Extremely High Switching Speedff
- \*Low Reverse Leakage Current
- \*Small Outline Surface Mount SC-89 Package
- \*High Reliability

**Applications:**

Ultra High Speed Switching

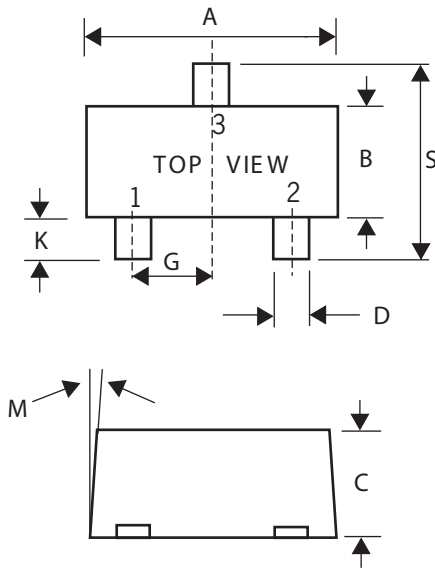
**SWITCHING DIODE**  
**100m AMPERRES**  
**80 VOLTS**



**SC-89**  
**(SOT-523F)**

### SC-89 Outline Demensions

Unit:mm



SC-89			
Dim	Min	Nom	Max
A	1.50	1.60	1.70
B	0.75	0.85	0.95
C	0.60	0.70	0.80
D	0.23	0.28	0.33
G	0.50BSC		
J	0.10	0.15	0.20
K	0.30	0.40	0.50
M	---	---	10°
N	---	---	10°
S	1.50	1.60	1.70

## Maximum Ratings (EACH DIODE)

Characteristic	Symbol	Value	Unit
Non-Repetitive Reverse Voltage	V <sub>RM</sub>	80	Volts
DC Reverse Voltage	V <sub>R</sub>	80	Volts
Forward Current	I <sub>F</sub>	100	mAdc
Peak Forward Surge Current	I <sub>FM</sub>	300	mAdc
Non-Repetitive Peak Forward Surge Current @t=1us	I <sub>FSM</sub>	4	Adc

## Thermal Characteristics

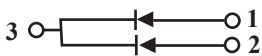
Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board *1, T <sub>A</sub> =25 °C Derate Above 25 °C	PD	150 1.2	mW mW/°C
Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	833	°C/W
Junction and Storage Temperature	T <sub>J</sub> , T <sub>stg</sub>	-55 to + 150	°C

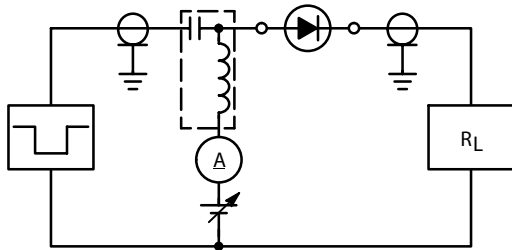
\*1 ER-5=1.0x0.75x0.062 in

## Electrical Characteristics (T<sub>A</sub>=25 °C Unless Otherwise Note) (Each Diode)

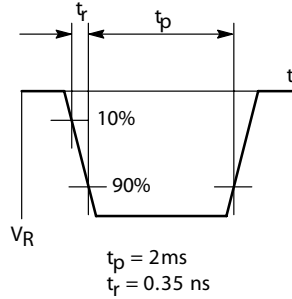
Characteristic	Symbol	Min	Max	Unit
Reverse Breakdown Voltage (I <sub>R</sub> =100 uAdc)	V <sub>BR</sub>	80	-	Vdc
Reverse Voltage Leakage Current (V <sub>R</sub> =70V)	I <sub>R</sub>	-	0.1	uAdc
Diode Capacitance (V <sub>R</sub> =6Vdc, f=1.0MHz)	C <sub>D</sub>	-	3.5	PF
Forward Voltage (I <sub>F</sub> =100 mAdc)	V <sub>F</sub>	-	1.2	Vdc
Reverse Recovery Time (Figure 1.) (I <sub>R</sub> =5.0 mAdc, V <sub>R</sub> =6.0 Vdc)	t <sub>rr</sub>	-	4.0	nS

## Device Marking

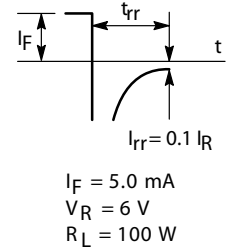
Item	Marking	Equivalent Circuit diagram
WAN222	N9	



RECOVERY TIME EQUIVALENT TEST CIRCUIT



INPUT PULSE



OUTPUT PULSE

FIG.1 Reverse Recovery Time Test Circuit for the DAN222

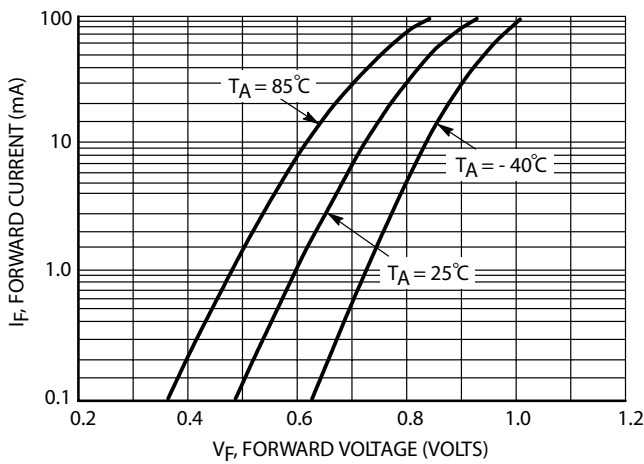


FIG.2 Forward Voltage

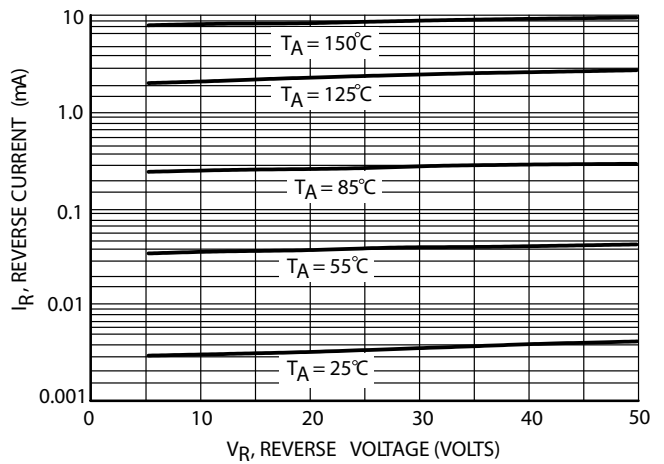


FIG.3 Reverse Current

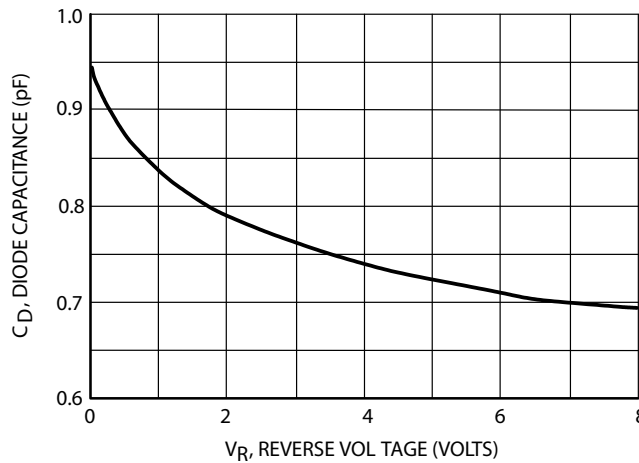


FIG.4 Diode Capacitance