

# DAN222

## Common Cathode Silicon Dual Switching Diode

This Common Cathode Silicon Epitaxial Planar Dual Diode is designed for use in ultra high speed switching applications. This device is housed in the SOT-416/SC-90 package which is designed for low power surface mount applications, where board space is at a premium.

- Fast  $t_{rr}$
- Low  $C_D$
- Available in 8 mm Tape and Reel

### MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ )

Rating	Symbol	Value	Unit
Reverse Voltage	$V_R$	80	Vdc
Peak Reverse Voltage	$V_{RM}$	80	Vdc
Forward Current	$I_F$	100	mAdc
Peak Forward Current	$I_{FM}$	300	mAdc
Peak Forward Surge Current	$I_{FSM}(1)$	2.0	Adc

### THERMAL CHARACTERISTICS

Rating	Symbol	Max	Unit
Power Dissipation	$P_D$	150	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to +150	$^\circ\text{C}$

1.  $t = 1 \mu\text{s}$

### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ )

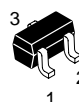
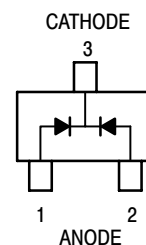
Characteristic	Symbol	Condition	Min	Max	Unit
Reverse Voltage Leakage Current	$I_R$	$V_R = 70 \text{ V}$	—	0.1	$\mu\text{Adc}$
Forward Voltage	$V_F$	$I_F = 100 \text{ mA}$	—	1.2	Vdc
Reverse Breakdown Voltage	$V_R$	$I_R = 100 \mu\text{A}$	80	—	Vdc
Diode Capacitance	$C_D$	$V_R = 6.0 \text{ V}, f = 1.0 \text{ MHz}$	—	3.5	pF
Reverse Recovery Time	$t_{rr}(2)$	$I_F = 5.0 \text{ mA}, V_R = 6.0 \text{ V}, R_L = 100 \Omega, I_{rr} = 0.1 I_R$	—	4.0	ns

2.  $t_{rr}$  Test Circuit on following page.



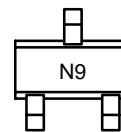
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SOT-416  
SC-90/SC-75  
CASE 463  
STYLE 3

### MARKING DIAGRAM



### ORDERING INFORMATION

Device	Package	Shipping
DAN222	SOT-416	3000/Tape & Reel

TYPICAL ELECTRICAL CHARACTERISTICS

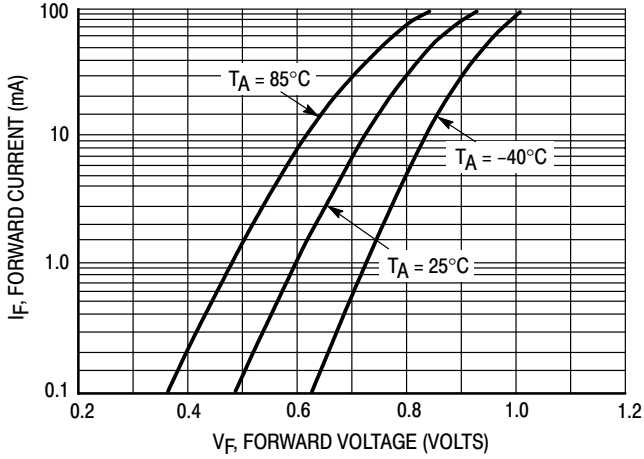


Figure 1. Forward Voltage

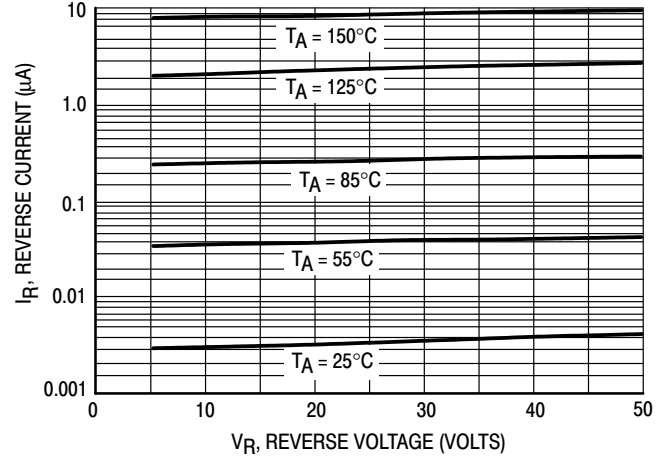


Figure 2. Reverse Current

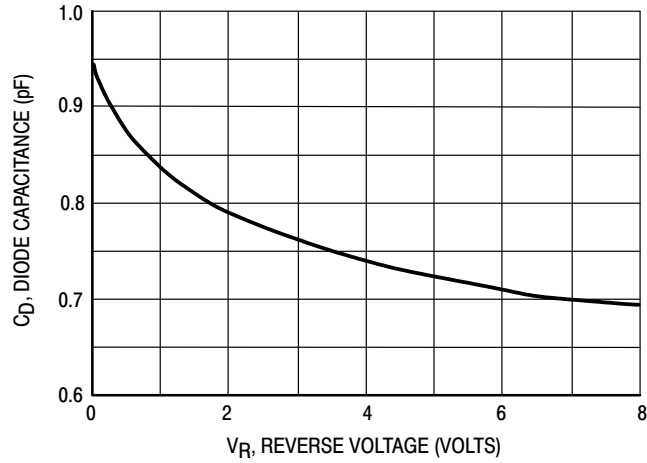
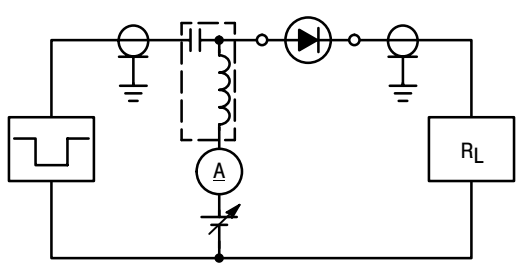
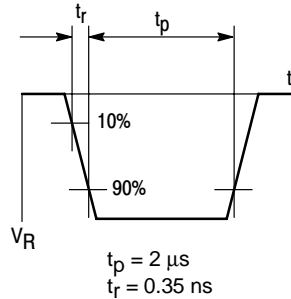


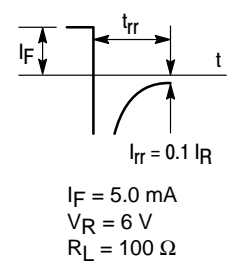
Figure 3. Diode Capacitance



RECOVERY TIME EQUIVALENT TEST CIRCUIT



INPUT PULSE



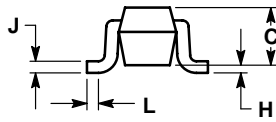
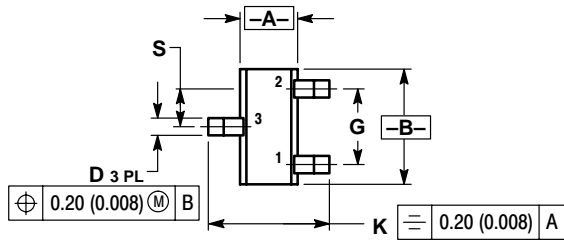
OUTPUT PULSE

Figure 4. Reverse Recovery Time Test Circuit for the DAN222

# DAN222


## PACKAGE DIMENSIONS

SOT-416/SC-90  
CASE 463-01  
ISSUE B



- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
  2. CONTROLLING DIMENSION: MILLIMETER.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.70	0.80	0.028	0.031
B	1.40	1.80	0.055	0.071
C	0.60	0.90	0.024	0.035
D	0.15	0.30	0.006	0.012
G	1.00 BSC		0.039 BSC	
H	---	0.10	---	0.004
J	0.10	0.25	0.004	0.010
K	1.45	1.75	0.057	0.069
L	0.10	0.20	0.004	0.008
S	0.50 BSC		0.020 BSC	

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