

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-75 package which is designed for low power surface mount applications, where board space is at a premium.

Features

- Fast t_{rr}
- Low C_D
- Pb-Free Packages are Available

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 (Note 1)	I_{FSM}	2.0	Adc

THERMAL CHARACTERISTICS

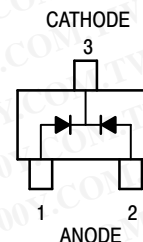
Characteristic	Symbol	Max	Unit
Power Dissipation	P_D	150	mW
Junction Temperature	T_J	150	$^\circ\text{C}/\text{W}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

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

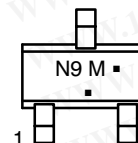
ON Semiconductor®

<http://onsemi.com>



SC-75/SOT-416
 CASE 463
 STYLE 3

MARKING DIAGRAM



- N9 = Specific Device Code
- M = Date Code*
- = Pb-Free Package

(Note: Microdot may be in either location)

*Date Code orientation may vary depending upon manufacturing location.

ORDERING INFORMATION

Device	Package	Shipping†
DAN222	SC-75/SOT-416	3000/Tape & Reel
DAN222G	SC-75/SOT-416 (Pb-Free)	3000/Tape & Reel
DAN222T1	SC-75/SOT-416	3000/Tape & Reel
DAN222T1G	SC-75/SOT-416 (Pb-Free)	3000/Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

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ELECTRICAL CHARACTERISTICS (T_A = 25°C)

Characteristic	Symbol	Condition	Min	Max	Unit
Reverse Voltage Leakage Current	I _R	V _R = 70 V	-	0.1	μAdc
Forward Voltage	V _F	I _F = 100 mA	-	1.2	Vdc
Reverse Breakdown Voltage	V _R	I _R = 100 μA	80	-	Vdc
Diode Capacitance	C _D	V _R = 6.0 V, f = 1.0 MHz	-	3.5	pF
Reverse Recovery Time	t _{rr} (2)	I _F = 5.0 mA, V _R = 6.0 V, R _L = 100 Ω, I _{rr} = 0.1 I _R	-	4.0	ns

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

TYPICAL ELECTRICAL CHARACTERISTICS

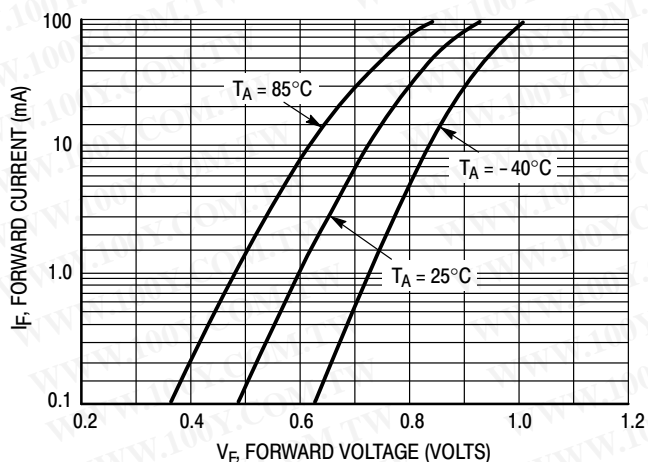


Figure 1. Forward Voltage

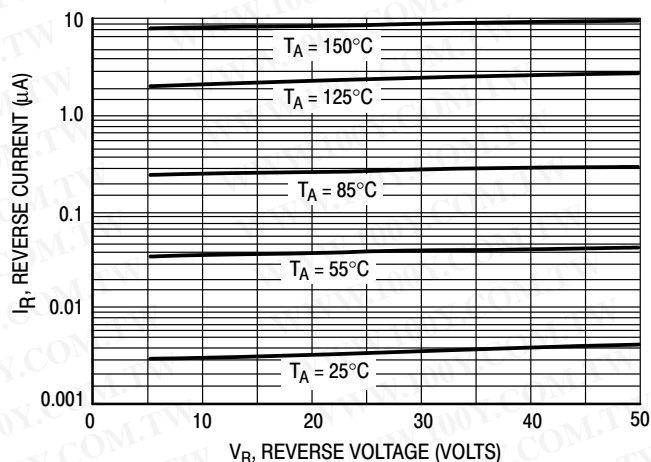


Figure 2. Reverse Current

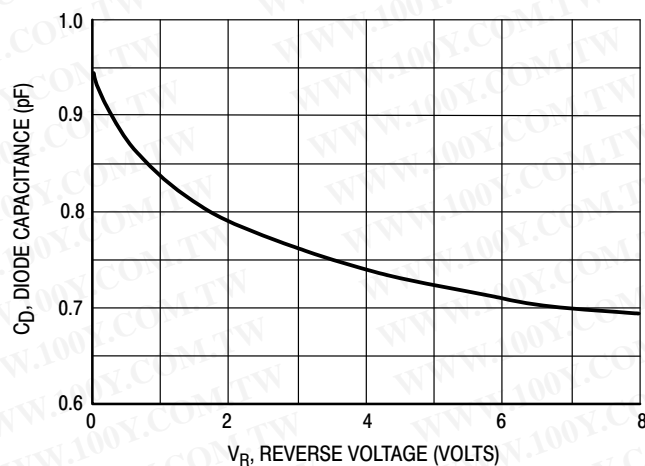
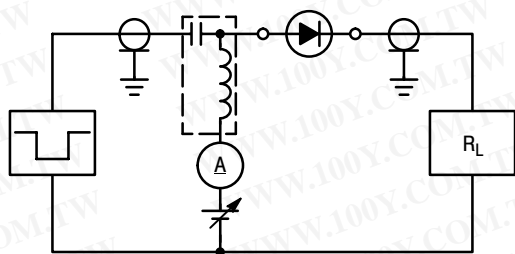
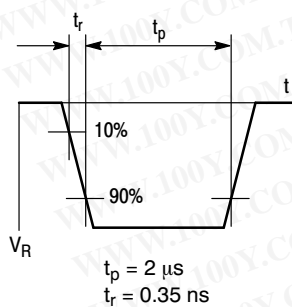


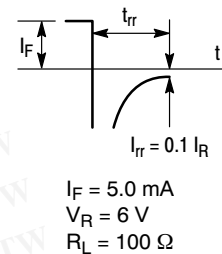
Figure 3. Diode Capacitance



RECOVERY TIME EQUIVALENT TEST CIRCUIT



INPUT PULSE



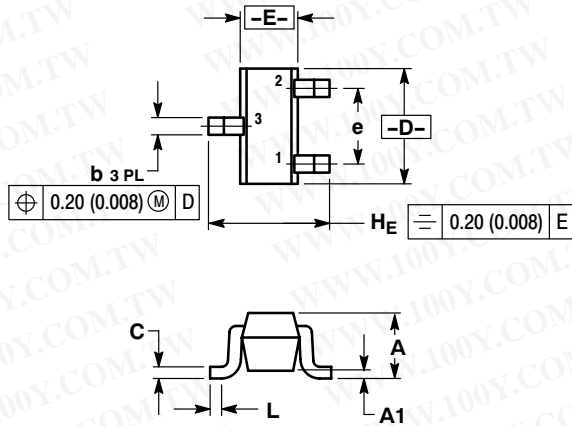
OUTPUT PULSE

Figure 4. Reverse Recovery Time Test Circuit for the DAN222

DAN222

PACKAGE DIMENSIONS

SC-75/SOT-416
CASE 463-01
ISSUE F

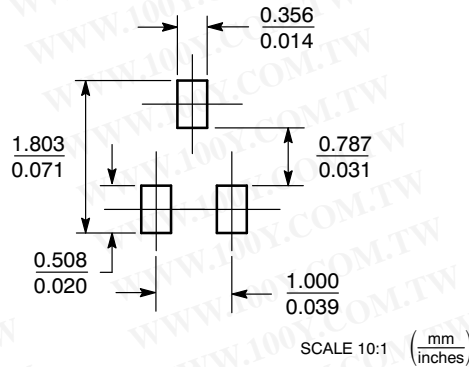


- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETER.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.70	0.80	0.90	0.027	0.031	0.035
A1	0.00	0.05	0.10	0.000	0.002	0.004
b	0.15	0.20	0.30	0.006	0.008	0.012
C	0.10	0.15	0.25	0.004	0.006	0.010
D	1.55	1.60	1.65	0.059	0.063	0.067
E	0.70	0.80	0.90	0.027	0.031	0.035
e	1.00 BSC			0.04 BSC		
L	0.10	0.15	0.20	0.004	0.006	0.008
H _E	1.50	1.60	1.70	0.061	0.063	0.065

- STYLE 3:
PIN 1. ANODE
2. ANODE
3. CATHODE

SOLDERING FOOTPRINT*



*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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