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.

Features

- Fast trr
- Low C_D
- Pb-Free Packages are Available

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

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	80	Vdc
Peak Reverse Voltage	V_{RM}	80	Vdc
Forward Current	Ι _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	TJ	150	°C/W
Storage Temperature Range	T _{stg}	-55 to +150	°C

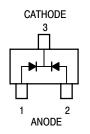
Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

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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	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.

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

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

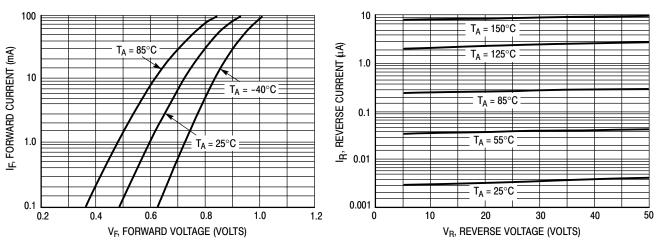


Figure 1. Forward Voltage

Figure 2. Reverse Current

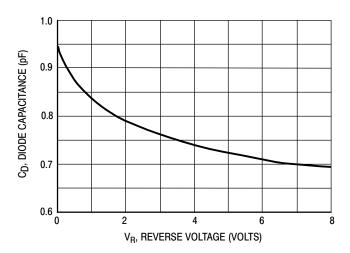


Figure 3. Diode Capacitance

DAN222

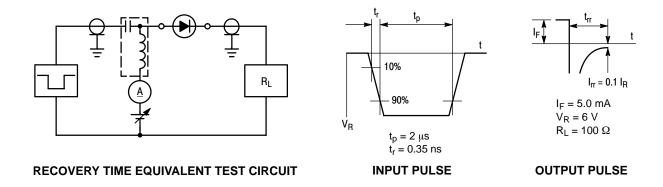
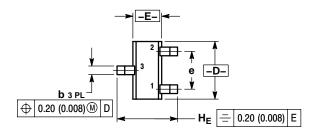


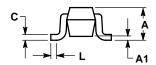
Figure 4. Reverse Recovery Time Test Circuit for the DAN222

DAN222

PACKAGE DIMENSIONS

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





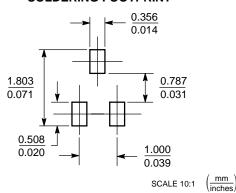
- 1. DIMENSIONING AND TOLERANCING PER ANSI
- Y14.5M, 1982. 2. CONTROLLING DIMENSION: MILLIMETER.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
Α	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
С	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
е	1.00 BSC		0.04 BSC			
L	0.10	0.15	0.20	0.004	0.006	0.008
HE	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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