DAN222, NSVDAN222

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
- NSV Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable
- These Devices are Pb–Free, Halogen Free/BFR Free and are RoHS Compliant

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	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	TJ	150	°C/W
Storage Temperature Range	T _{stg}	-55 to +150	°C

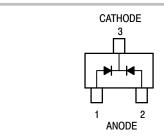
Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. $t = 1 \mu S$



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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	Package	Shipping [†]
DAN222G	SC-75 (Pb-Free)	3000 / Tape & Reel
DAN222T1G	SC-75 (Pb-Free)	3000 / Tape & Reel
NSVDAN222T1G	SC-75 (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 $(T_A = 25^{\circ}C)$

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} (Note 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

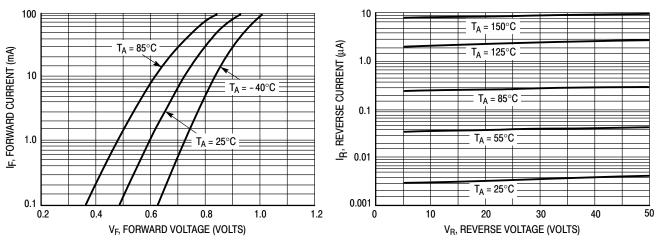


Figure 1. Forward Voltage

Figure 2. Reverse Current

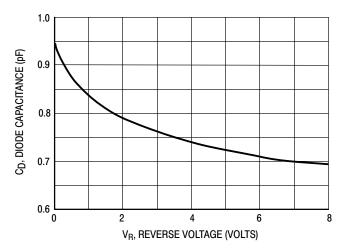


Figure 3. Diode Capacitance

DAN222, NSVDAN222

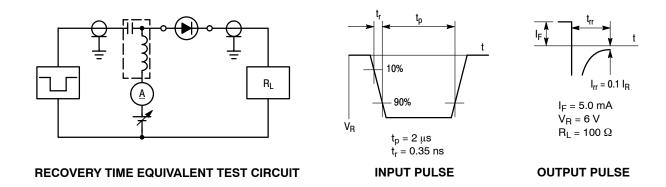


Figure 4. Reverse Recovery Time Test Circuit for the DAN222

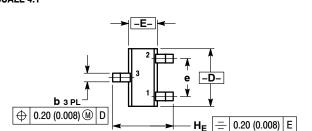
MECHANICAL CASE OUTLINE

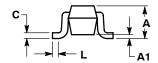




SC-75/SOT-416 CASE 463-01 ISSUE G

DATE 07 AUG 2015





STYLE 1: PIN 1. BASE 2. EMITTER

STYLE 4:

3. COLLECTOR

PIN 1. CATHODE 2. CATHODE 3. ANODE

STYLE 5: PIN 1. GATE 2. SOURCE

3. DRAIN

STYLE 2: PIN 1. ANODE 2. N/C 3. CATHODE

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

NOTES:

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

		MILLIMETERS			INCHES		
DII	И	MIN	NOM	MAX	MIN	NOM	MAX
Α		0.70	0.80	0.90	0.027	0.031	0.035
A	1	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	0.061	0.063	0.065
E		0.70	0.80	0.90	0.027	0.031	0.035
е		1.00 BSC			C	0.04 BSC)
L		0.10	0.15	0.20	0.004	0.006	0.008
HE	:	1.50	1.60	1.70	0.060	0.063	0.067

GENERIC MARKING DIAGRAM*

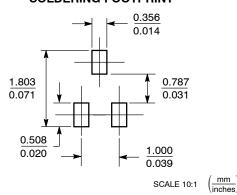


XX= Specific Device Code

Μ = Date Code

= Pb-Free Package

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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DESCRIPTION:	SC-75/SOT-416		PAGE 1 OF 1	

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^{*}This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot " ■", may or may not be present.

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