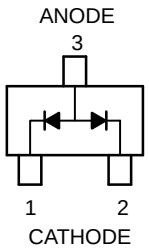
Common Anode Silicon Dual Switching Diodes

DAP222M3T5G

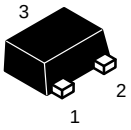


These Common Anode Silicon Epitaxial Planar Dual Diodes are designed for use in ultra high speed switching applications. The DAP222 device is housed in the SOT-723 package which is designed for low power surface mount applications, where board space is at a premium.

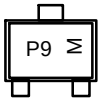
Features

- Fast t_{rr}
- Low C_D
- Available in 4 mm Tape and Reel
- This is a Pb-Free Device

MARKING DIAGRAM



SOT-723
CASE 631AA
STYLE 4



P9 = Specific Device Code
M = Date Code

MAXIMUM RATINGS (T_A = 25 °C)

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	80	V
Peak Reverse Voltage	V_{RM}	80	V
Forward Current	I_F	100	mA

THERMAL CHARACTERISTICS

Rating	Symbol	Max	Unit
Power Dissipation	P_D	260	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	−55 ~ +150	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.
1. t = 1.0 μS.

ORDERING INFORMATION

Device	Package	Shipping†
DAP222M3T5G	SOT-723 (Pb-Free)	8000/Tape & Reel

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

ELECTRICAL CHARACTERISTICS (T_A = 25 °C)

Characteristic	Symbol	Condition	Min	Max	Unit
Reverse Voltage Leakage Current	I_R	V_R = 70 V	–	0.1	μA
Forward Voltage	V_F	I_F = 100 mA	–	1.2	V
Reverse Breakdown Voltage	V_R	I_R = 100 μA	80	–	V
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 for DAP222 in Figure 4.

TYPICAL ELECTRICAL CHARACTERISTICS

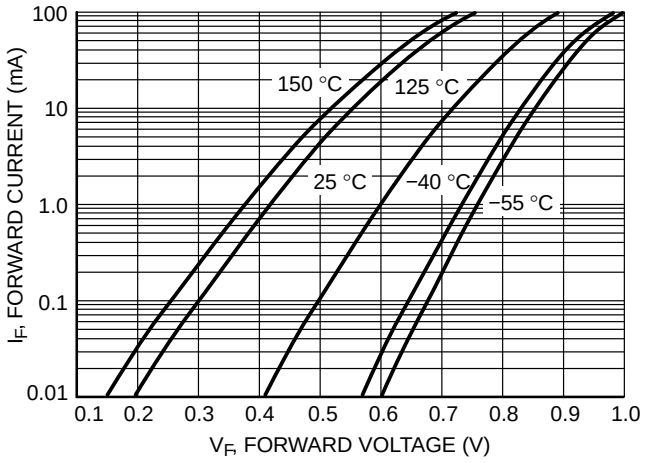


Figure 1. Forward Voltage

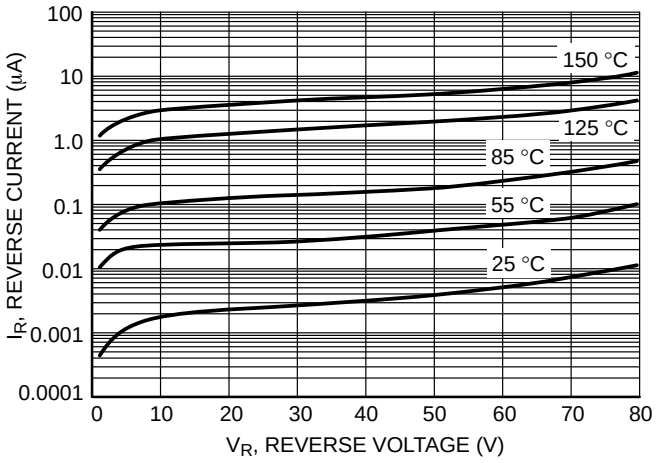


Figure 2. Reverse Current

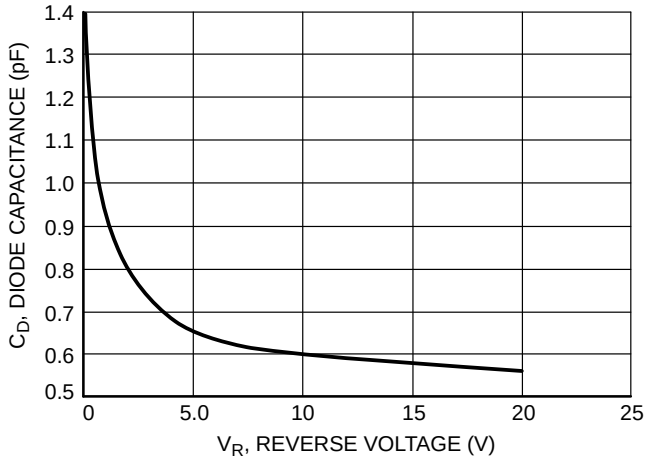
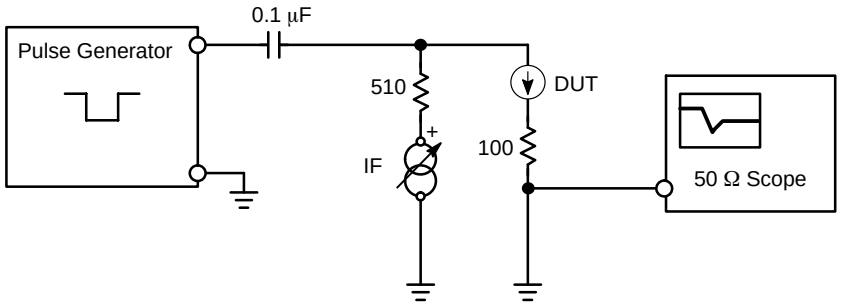
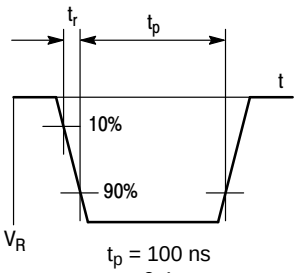


Figure 3. Diode Capacitance

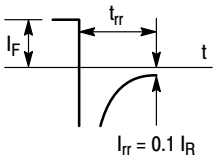


RECOVERY TIME EQUIVALENT TEST CIRCUIT



t_p = 100 ns
t_r = 0.4 ns
f = 5 kHz
V_R = 6 V

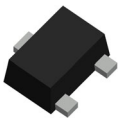
INPUT PULSE



I_F = 5.0 mA
V_R = 6 V
R_L = 100 Ω

OUTPUT PULSE

Figure 4. Reverse Recovery Time Test Circuit

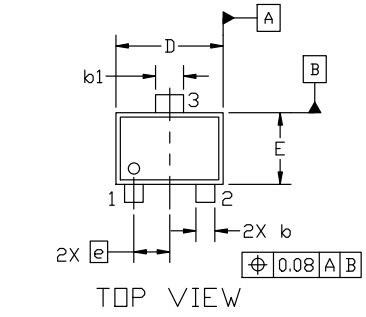


SOT−723 1.20x0.80x0.50, 0.40P
CASE 631AA
ISSUE E

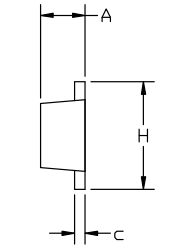
DATE 24 JAN 2024

NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 2018.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

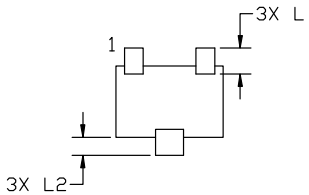
DIM	MILLIMETERS		
	MIN.	NOM.	MAX.
A	0.45	0.50	0.55
b	0.15	0.21	0.27
b1	0.25	0.31	0.37
c	0.07	0.12	0.17
D	1.15	1.20	1.25
E	0.75	0.80	0.85
e	0.40 BSC		
H	1.15	1.20	1.25
L	0.29 REF		
L2	0.15	0.20	0.25



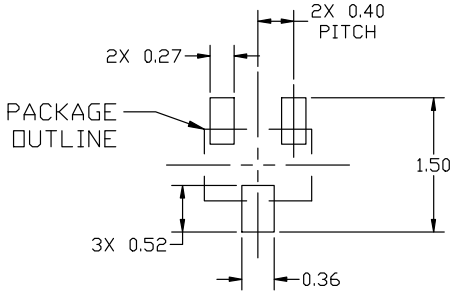
TOP VIEW



SIDE VIEW



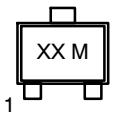
BOTTOM VIEW



RECOMMENDED MOUNTING
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.

GENERIC
MARKING DIAGRAM*



XX = Specific Device Code
M = Date Code

*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. Some products may not follow the Generic Marking.

STYLE 1:
PIN 1. BASE
2. EMITTER
3. COLLECTOR

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

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

STYLE 4:
PIN 1. CATHODE
2. CATHODE
3. ANODE

STYLE 5:
PIN 1. GATE
2. SOURCE
3. DRAIN

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DESCRIPTION:	**SOT−723 1.20x0.80x0.50, 0.40P**	**PAGE 1 OF 1**

ADDITIONAL INFORMATION

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