

NSD070AL

THERMAL CHARACTERISTICS

Characteristic	Symbol	Min	Typ	Max	Unit
Thermal Resistance Junction-to-Ambient (Note 1)	$R_{\theta JA}$	-	-	556	$^{\circ}\text{C}/\text{W}$
Total Device Dissipation @ $T_A = 25^{\circ}\text{C}$	P_D	-	-	225	mW
Junction and Storage Temperature Range	T_J, T_{stg}	-	-	-65 to +150	$^{\circ}\text{C}$

1. FR-4 = $1.0 \times 0.75 \times 0.062$ in.

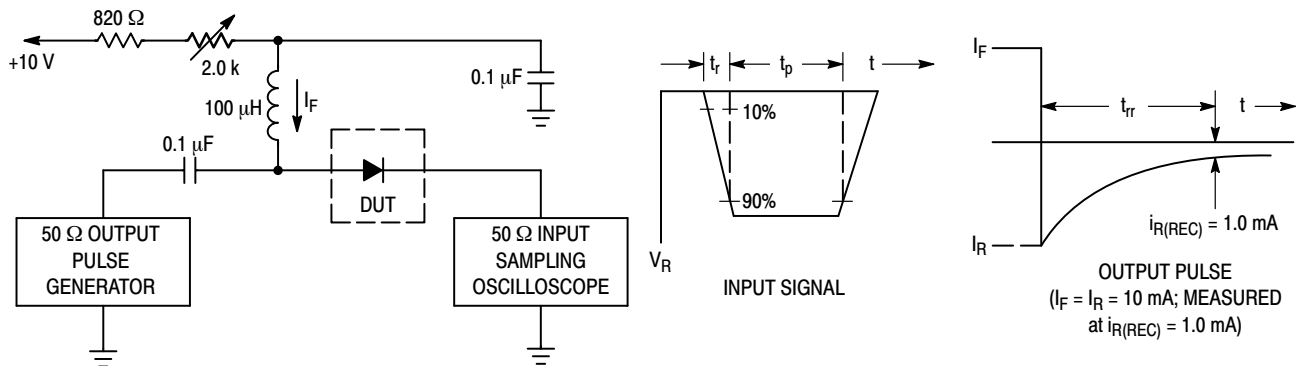
ELECTRICAL CHARACTERISTICS ($T_A = 25^{\circ}\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
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OFF CHARACTERISTICS

Reverse Breakdown Voltage ($V_R = 70$ Vdc)	$V_{(BR)}$	70	-	-	V
Reverse Voltage Leakage Current ($V_R = 70$ Vdc) ($V_R = 70$ Vdc, $T_J = 150^{\circ}\text{C}$)	I_R	-	-	5.0 80	nA
Diode Capacitance ($V_R = 0$ V, $f = 1.0$ MHz)	C_D	-	1.0	2.0	pF
Forward Voltage ($I_F = 1.0$ mA) ($I_F = 10$ mA) ($I_F = 50$ mA) ($I_F = 150$ mA)	V_F	-	-	900 1000 1100 1250	mV
Reverse Recovery Time ($I_F = I_R = 10$ mA) (Figure 1)	t_{rr}	-	-	3.0	μs

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.



- Notes: 1. A 2.0 k Ω variable resistor adjusted for a Forward Current (I_F) of 10 mA.
 2. Input pulse is adjusted so $I_{R(\text{peak})}$ is equal to 10 mA.
 3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

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TYPICAL CHARACTERISTICS

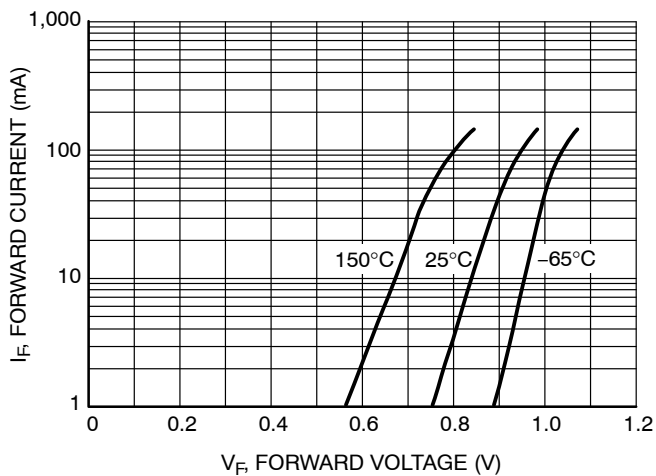


Figure 2. Forward Voltage

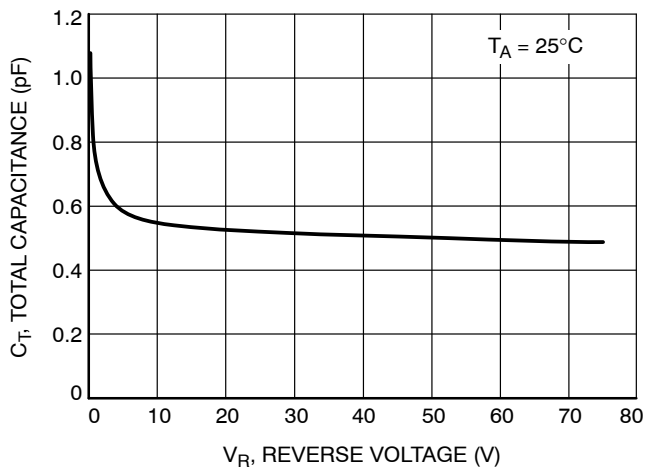
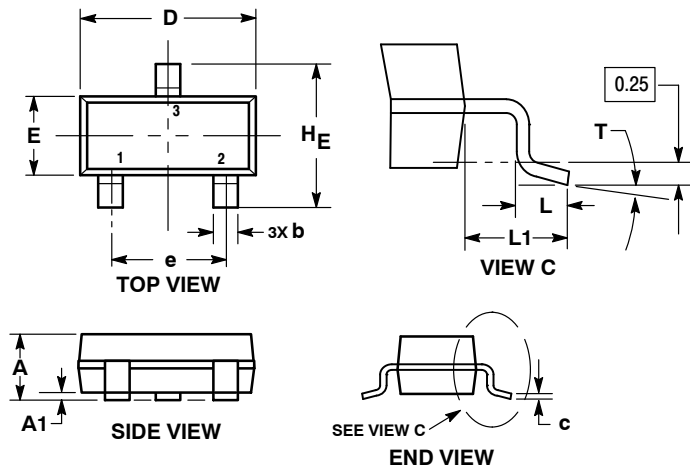


Figure 3. Capacitance

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PACKAGE DIMENSIONS

SOT-23 (TO-236)
CASE 318-08
ISSUE AR

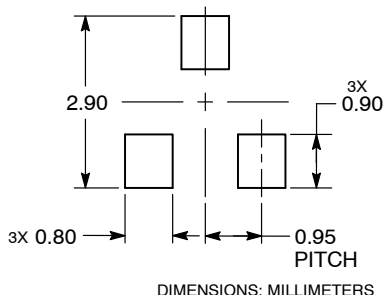


NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF THE BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.89	1.00	1.11	0.035	0.039	0.044
A1	0.01	0.06	0.10	0.000	0.002	0.004
b	0.37	0.44	0.50	0.015	0.017	0.020
c	0.08	0.14	0.20	0.003	0.006	0.008
D	2.80	2.90	3.04	0.110	0.114	0.120
E	1.20	1.30	1.40	0.047	0.051	0.055
e	1.78	1.90	2.04	0.070	0.075	0.080
L	0.30	0.43	0.55	0.012	0.017	0.022
L1	0.35	0.54	0.69	0.014	0.021	0.027
HE	2.10	2.40	2.64	0.083	0.094	0.104
T	0°	---	10°	0°	---	10°

RECOMMENDED SOLDERING FOOTPRINT*



DIMENSIONS: MILLIMETERS

*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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