

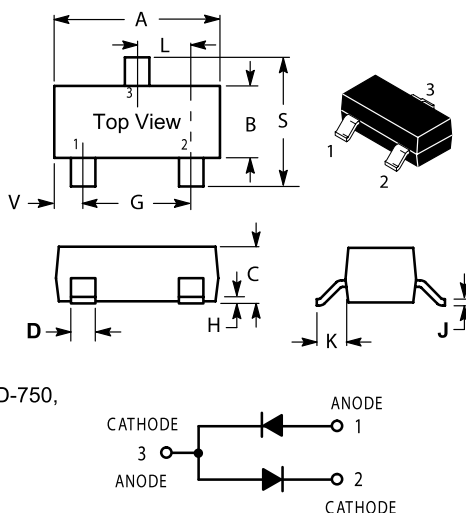
A suffix of "-C" specifies halogen & lead-free

FEATURES

- RoHS Compliant Product
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance

MECHANICAL DATA

- Case: SOT-23 Molded Glass
- Terminals : Solder Plated, Solderable Per MIL-STD-750, Method 2026
- Polarity: Indicated by Cathode band
- Mounting position: Any
- Weight: 0.008 grams (approx.)



SOT-23		
Dim	Min	Max
A	2.800	3.040
B	1.200	1.400
C	0.890	1.110
D	0.370	0.500
G	1.780	2.040
H	0.013	0.100
J	0.085	0.177
K	0.450	0.600
L	0.890	1.020
S	2.100	2.500
V	0.450	0.600
All Dimension in mm		

MAXIMUM RATINGS (EACH DIODE)

Device Marking: A7

RATING	SYMBOL	VALUE	UNIT
Reverse Voltage	V_{RRM}	70	V
Forward Current	I_F	215	mA
Peak Forward Surge Current	$I_{FM} (surge)$	500	mA

● THERMAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	Max.	UNIT
Total Device Dissipation FR-5 Board ⁽¹⁾	P_D	225	mW
Derate above 25°C		1.8	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C}/\text{W}$
Total Device Dissipation Alumina Substrate ⁽²⁾	P_D	300	mW
Derate above 25°C		2.4	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	-55 ~ +150	$^\circ\text{C}$
Storage Temperature	T_{STG}	25 ± 5	$^\circ\text{C}$
Storage Humidity	RH	45 ± 5	%

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

OFF CHARACTERISTICS

CHARACTERISTIC	SYMBOL	TEST CONDITIONS	Min.	Max.	UNIT
Reverse Breakdown Voltage	V_{BR}	$I_{BR} = 100 \mu\text{A}$	70	-	V
Reverse Voltage Leakage Current	I_R	$V_R = 25 \text{ V}, T_J = 150^\circ\text{C}$	-	30	μA
		$V_R = 70 \text{ V}$	-	2.5	
		$V_R = 70 \text{ V}, T_J = 150^\circ\text{C}$	-	50	
Diode Capacitance	C_D	$V_R = 0, f = 1.0 \text{ MHz}$	-	1.5	pF
Forward Voltage	V_F	$I_F = 1.0 \text{ mA}$	-	715	mV
		$I_F = 10 \text{ mA}$	-	855	
		$I_F = 50 \text{ mA}$	-	1000	
		$I_F = 150 \text{ mA}$	-	1250	
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10 \text{ mA}$, $I_{R(REC)} = 1.0 \text{ mA}$ (Figure 1) $R_L = 100 \Omega$	-	6.0	ns

1. FR-5 = 1.0 X 0.75 X 0.062 in. 2. Alumina = 0.4 X 0.3 X 0.024 in. 99.5% alumina.

● RATING AND CHARACTERISTIC CURVES

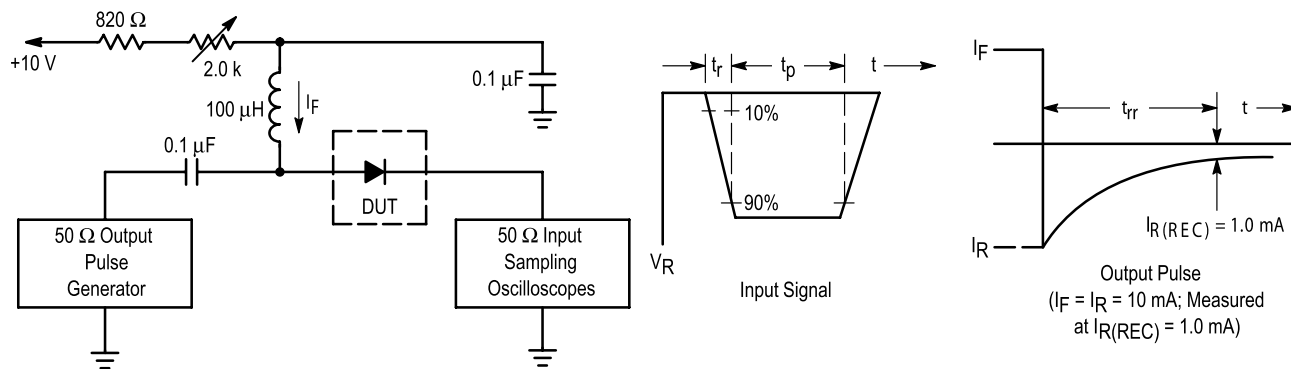


Figure 1. Recovery Time Equivalent Test Circuit

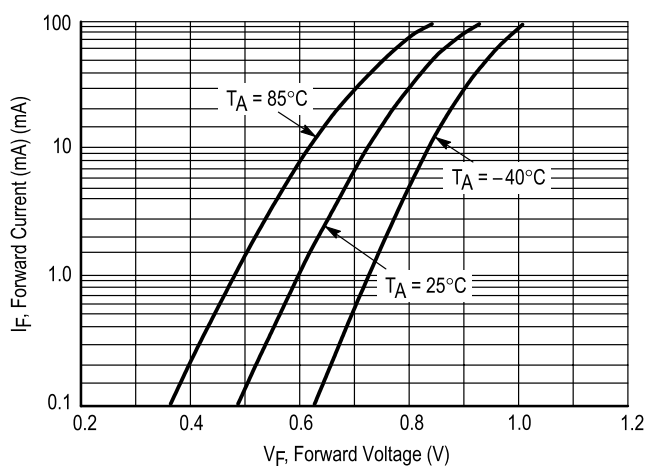


Figure 2. Forward Voltage

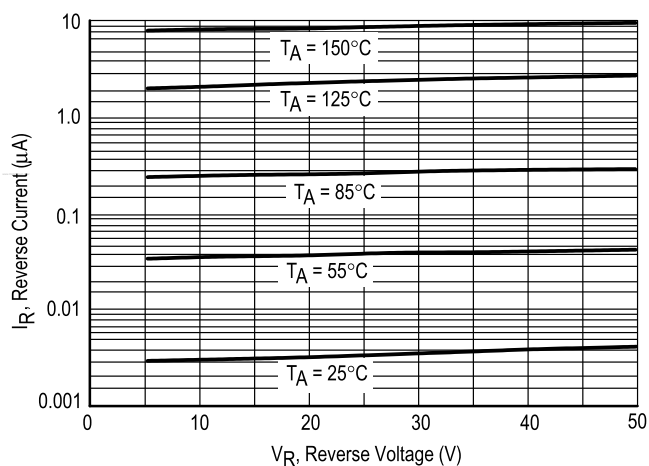


Figure 3. Leakage Current

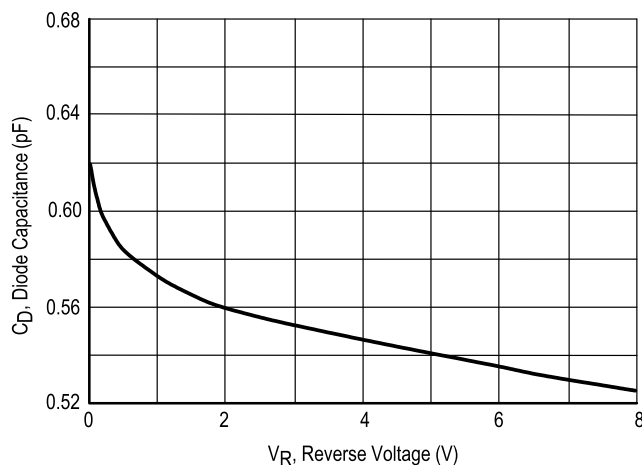


Figure 4. Capacitance