

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- High conductance.
- Connected in series.
- Surface mount package ideally suited for automatic insertion.

APPLICATIONS

- High-speed switching in thick and thin-film circuits.

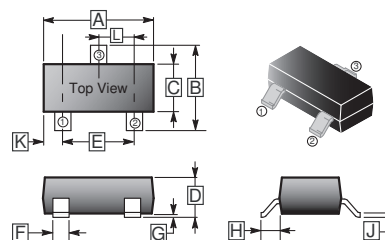
MARKING

KJG / A7

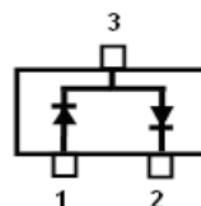
PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-323	3K	7 inch

SOT-323



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.80	2.20	G	0.1	REF.
B	1.80	2.45	H	0.525	REF.
C	1.1	1.4	J	0.08	0.25
D	0.80	1.10	K	0.8	TYP.
E	1.20	1.40	L	0.65	TYP.
F	0.15	0.40			



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	80	V	
Forward current	I_F	200	mA	
Peak Forward Surge Current @ 1 μ S	I_{FSM}	4	A	
Total Device Dissipation FR-5 Board ¹	P_D	$T_A = 25^\circ\text{C}$	200	mW
		De-rate above 25 $^\circ\text{C}$	1.6	mW / $^\circ\text{C}$
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	625	$^\circ\text{C} / \text{W}$	
Total Device Dissipation Alumina Substrate ²	P_D	$T_A = 25^\circ\text{C}$	300	mW
		De-rate above 25 $^\circ\text{C}$	2.4	mW / $^\circ\text{C}$
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C} / \text{W}$	
Junction, Storage Temperature	T_J, T_{STG}	-65~150	$^\circ\text{C}$	

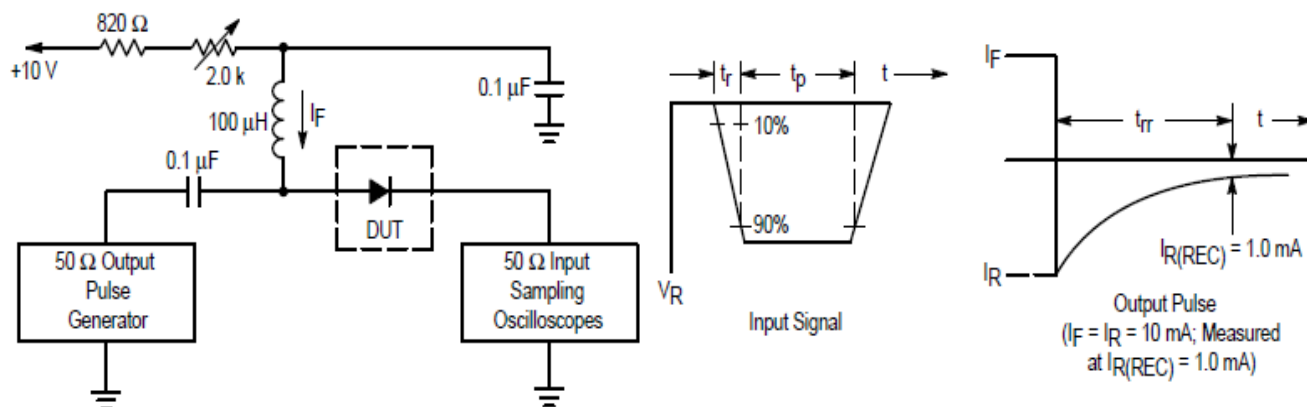
Note:

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.

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

Parameter	Symbol	Min.	Max.	Unit	Test Condition
Reverse Breakdown Voltage	$V_{(BR)R}$	75	-	V	$I_{BR}=100\mu\text{A}$
Leakage Current	I_R	-	30	μA	$V_R=25\text{V}, T_J=150^\circ\text{C}$
		-	2.5		$V_R=70\text{V}$
		-	50		$V_R=70\text{V}, T_J=150^\circ\text{C}$
Forward Voltage	V_F	-	715	mV	$I_F=1\text{mA}$
		-	855		$I_F=10\text{mA}$
		-	1000		$I_F=50\text{mA}$
		-	1250		$I_F=150\text{mA}$
Diode Capacitance	C_D	-	1.5	pF	$V_R=0, f=1\text{MHz}$
Reverse Recovery Time	T_{RR}	-	6	nS	$I_F=I_R=10\text{mA}, I_R(\text{REC})=1\text{mA}$ (Figure 1), $R_L=100\Omega$

RATINGS AND CHARACTERISTIC CURVES



- 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

RATINGS AND CHARACTERISTIC CURVES

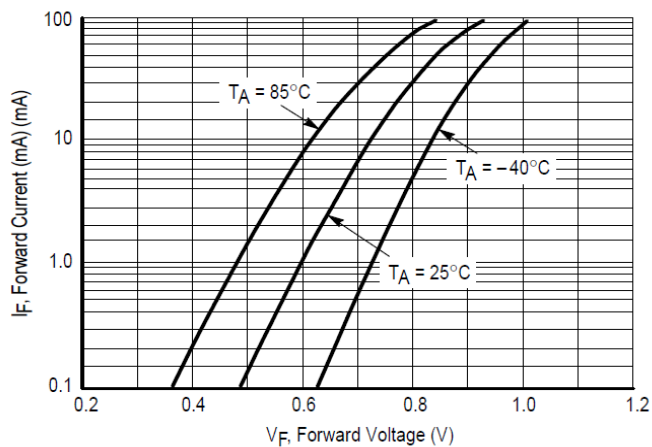


Figure 2. Forward Voltage

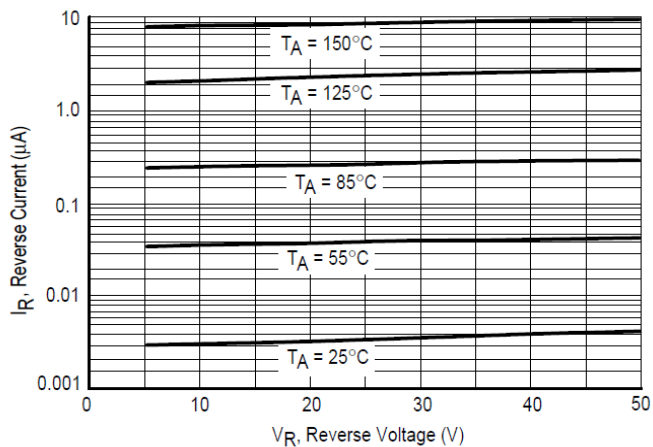


Figure 3. Leakage Current

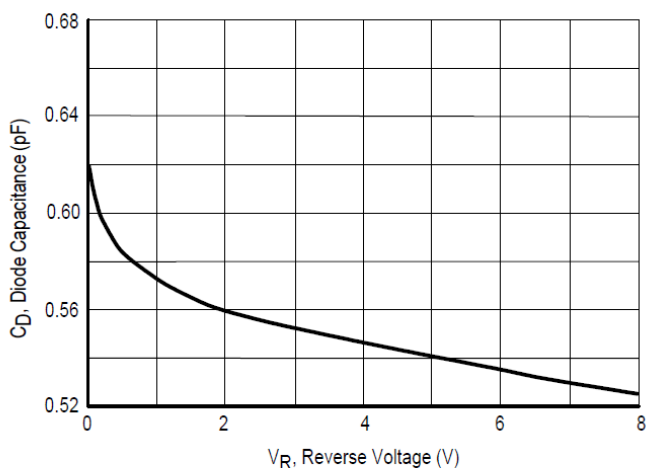


Figure 4. Capacitance