

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

FEATURES

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

MARKING

5D

2KA

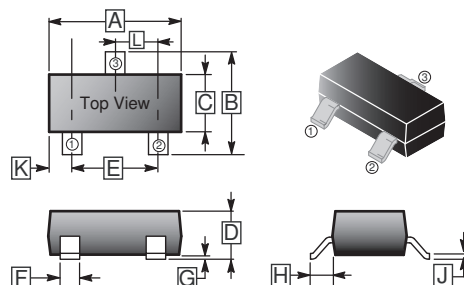
PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-23	3K	7 inch

ORDER INFORMATION

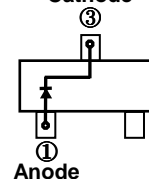
Part Number	Type
MMBD914	Lead (Pb)-free
MMBD914-C	Lead (Pb)-free and Halogen-free

SOT-23



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.70	3.10	G	0	0.18
B	2.10	2.95	H	0.55	REF.
C	1.20	1.7	J	0.08	0.20
D	0.89	1.3	K	0.6	REF.
E	1.70	2.3	L	0.95	BSC.
F	0.30	0.50			

Cathode



ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Reverse Voltage	V _R	100	V
Forward Current	I _F	200	mA
Peak Forward Surge Current	I _{FM(surge)}	500	mA
Total Device Dissipation FR-5 Board ¹	P _D	T _A =25°C	225
		Derate above 25°C	1.8
Thermal Resistance Junction-Ambient	R _{θJA}	556	°C/W
Total Device Dissipation Alumina Substrate ²	P _D	T _A =25°C	300
		Derate above 25°C	2.4
Thermal Resistance Junction-Ambient	R _{θJA}	417	°C/W
Junction, Storage Temperature	T _J , T _{STG}	-55~150	°C

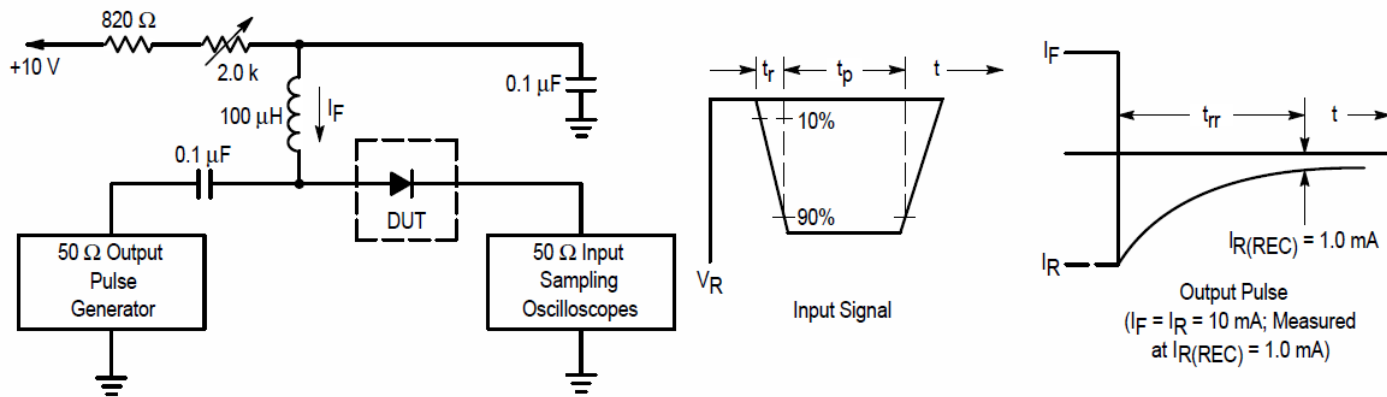
ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Reverse Breakdown Voltage	V _(BR)	100	-	-	V	I _R =100μA
Reverse Voltage Leakage Current	I _R	-	-	25	nA	V _R =20V
		-	-	5	μA	V _R =75V
Forward Voltage	V _F	-	-	1	V	I _F =10mA
Diode Capacitance	C _T	-	4	-	pF	V _R =0, f=1MHz
Reverse Recovery Time	T _{RR}	-	4	-	nS	I _F =I _R =10mA (Figure 1)

Notes:

1. FR-5=1x0.75x0.062 in.
2. Alumina=0.4x0.3x0.024 in. 99.5% alumina.

RATINGS AND CHARACTERISTIC CURVES



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

Figure 1. Recovery Time Equivalent Test Circuit

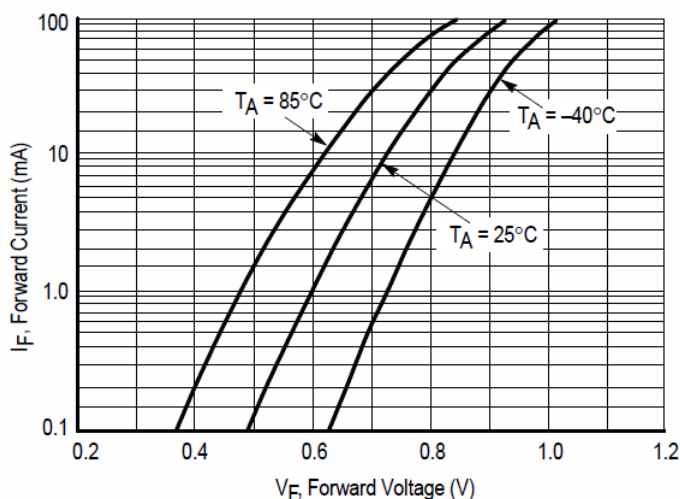


Figure 2. Forward Voltage

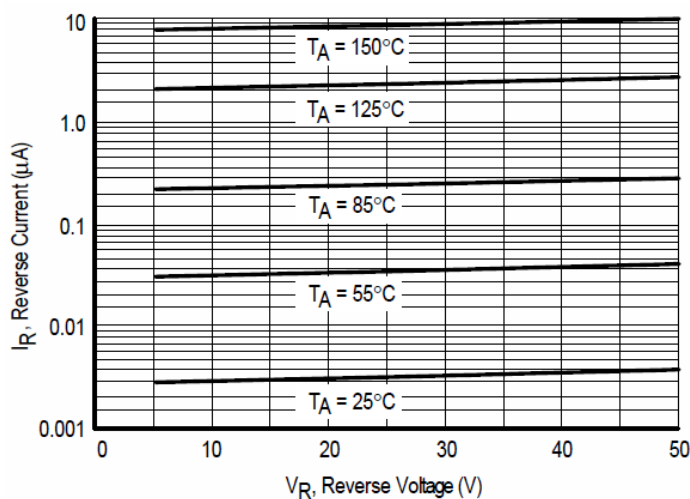


Figure 3. Leakage Current

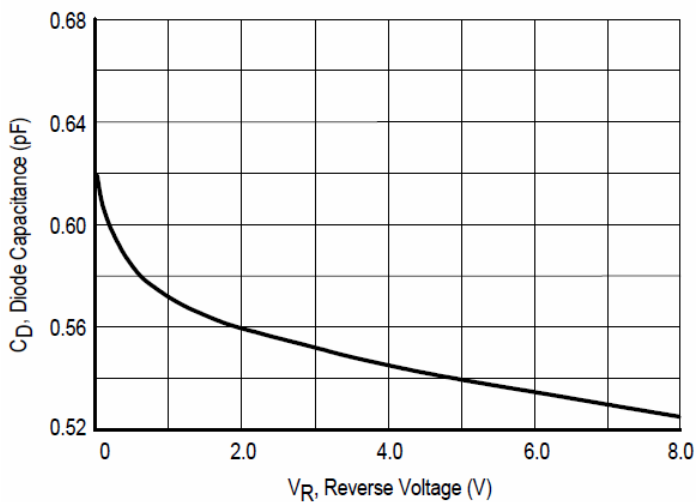


Figure 4. Capacitance