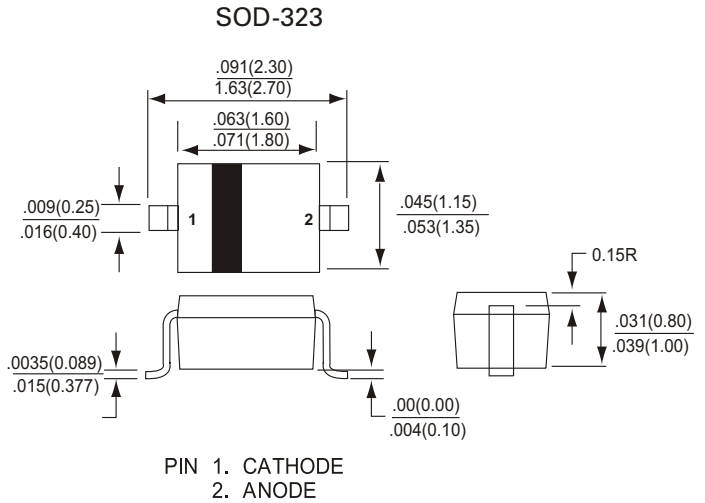


1SS355

SURFACE MOUNT SWITCHING DIODES

SWITCHING DIODES 100m AMPERES 100 VOLTS



FEATURES

- High Speed $\leq 4\text{ns}$
- Low Reverse Leakage Current .
- Small Outline Surface Mount SOD-323 Package

MAXIMUM RATING

Rating	Symbol	Value	Unit
Reverse Voltage	VR	100	Vdc
Forward Current	IF	100	mAdc
Peak Forward Surge Current	IFM(Surge)	500	mAdc

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max	Unit
Total Device Dissipation FR-5 Board $T_A=25^\circ\text{C}$ Derate Above 25°C	PD	225 1.8	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C}/\text{W}$
Total Device Dissipation Alumina Substrate, ⁽²⁾ $T_A=25^\circ\text{C}$ Derate Above 25°C	PD	300 2.4	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature	T_J, T_{stg}	-55 to + 150	$^\circ\text{C}$

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


Characteristics	Symbol	Min	Max	Unit
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Off Characteristics

Reverse Breakdown Voltage (I _R =100μA _{dc})	V(BR)	100	—	V _{cc}
Forward Voltage(I _F =100mA _{dc})	V _F	—	1200	mV _{dc}
Reverse Voltage Leakage Current (V _R =80V _{dc})	I _R	—	0.1	μA _{dc}
Diode Capacitance (V _R =0.5V, f=1.0MHz)	C _T	—	3.5	pF
Reverse Recover Time (I _F =I _R =10mA _{dc})	t _{rr}	—	4.0	ns

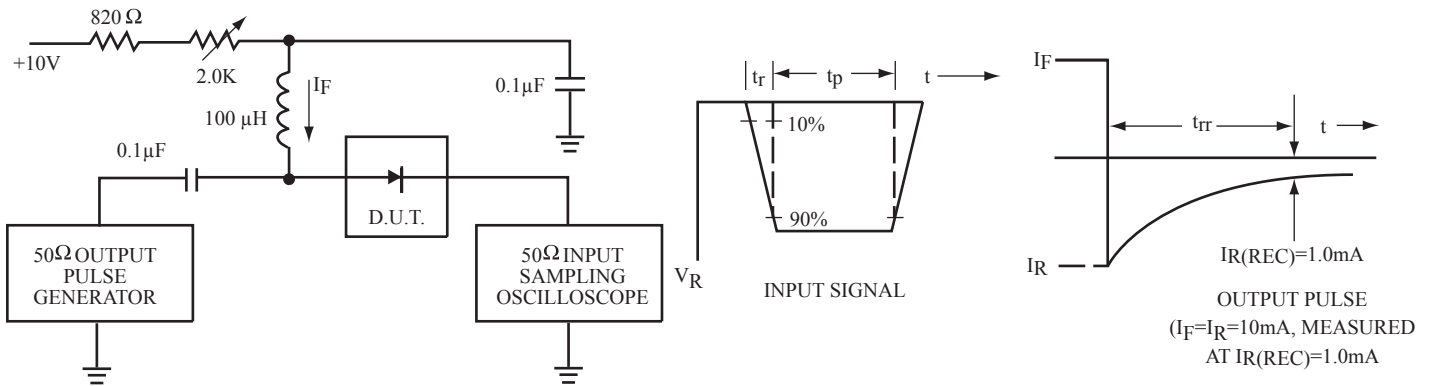
1. FR-5=1.0x0.75x0.062 in 2.Alumina=0.4x0.3x0.024 in. 99.5% alumina.

DEVICE MARKING

Item	Marking	Equivalent Circuitdiagram
1SS 355	5D	

SURFACE MOUNT SWITCHING DIODES

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

Figure 1. Recovery Time Equivalent Test Circuit

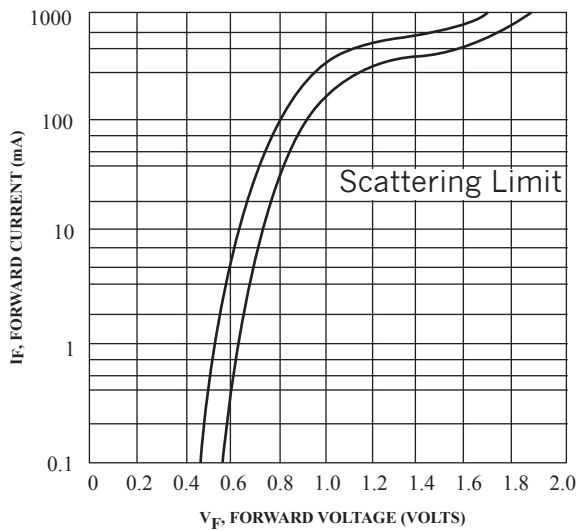


Figure 2. Forward Voltage

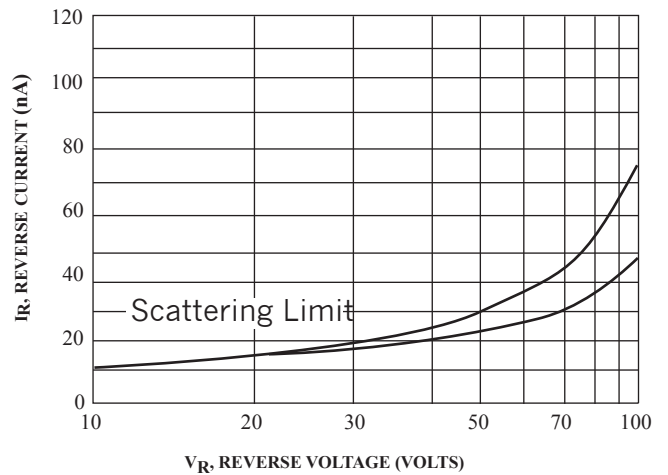


Figure 3. Leakage Current

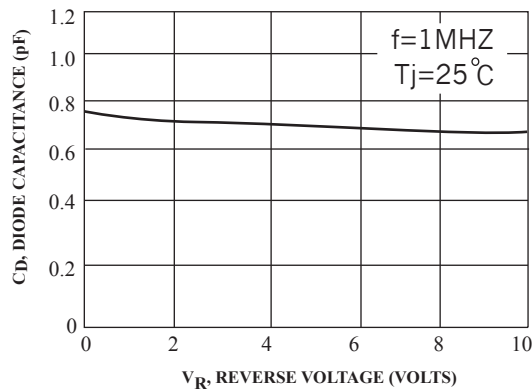


Figure 4. Capacitance