

Dual Switching Diodes

Features

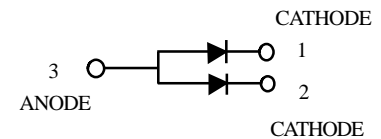
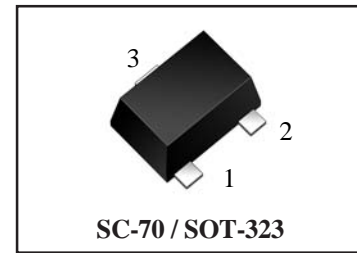
- We declare that the material of product compliance with RoHS requirements.

DEVICE MARKING

FDS56U = A1

MAXIMUM RATINGS (T_A = 25°C)

Rating	Symbol	Max	Unit
Reverse Voltag	V _R	70	Vdc
Forward Current	I _F	200	mAdc
Peak Forward Surge Current	I _{FM(surge)}	500	mAdc



Ordering Information

Device	Marking	Shipping
FDS56U	A1	3000/Tape&Reel

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board ⁽¹⁾ T _A = 25°C Derate above 25°C	P _D	200 1.6	mW mW/°C
Thermal Resistance, Junction to Ambient	R _{CJA}	0.625	°C/W
Total Device Dissipation Alumina Substrate ⁽²⁾ T _A = 25°C Derate above 25°C	P _D	300 2.4	mW mW/°C
Thermal Resistance, Junction to Ambient	R _{CJA}	417	°C/W
Junction and Storage Temperature	T _J , T _{stg}	-55 to +150	°C

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

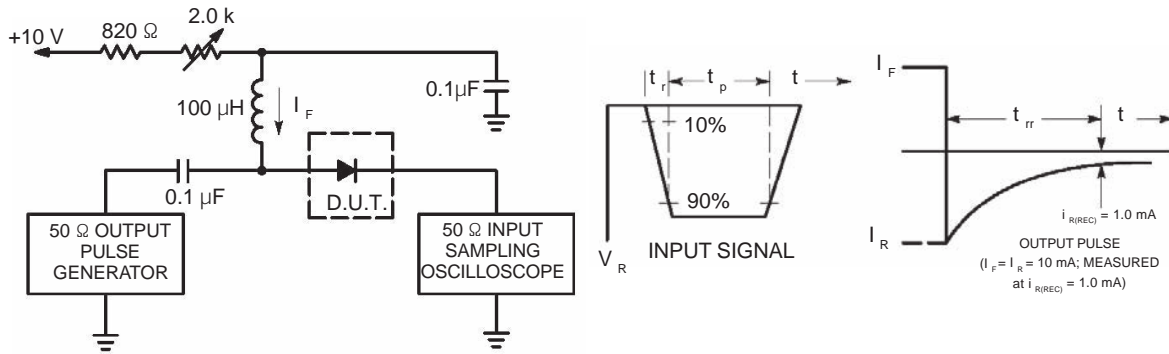
Characteristic	Symbol	Min	Max	Unit
----------------	--------	-----	-----	------

OFF CHARACTERISTICS

Reverse Breakdown Voltage (I _{BR}) = 100 μAdc)	V _(BR)	70	—	Vdc
Reverse Voltage Leakage Current (V _R = 25 Vdc, T _J = 150°C) (V _R = 70 Vdc) (V _R = 70 Vdc, T _J = 150°C)	I _R	—	30 2.5 50	μAdc
Diode Capacitance (V _R = 0, f = 1.0 MHz)	C _D	—	2.0	pF
Forward Voltage (I _F = 1.0 mAdc) (I _F = 10 mAdc) (I _F = 60 mAdc) (I _F = 150 mAdc)	V _F	—	715 855 1000 1250	mVdc
Reverse Recovery Time (I _F = I _R = 10 mAdc, R _L = 100 Ω, I _{R(REC)} = 1.0 mAdc) (Figure 1)	t _{rr}	—	6.0	ns

1. FR-5 = 1.0 × 0.75 × 0.062 in.

2. Alumina = 0.4 × 0.3 × 0.024 in. 99.5% alumina.



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

Figure 1. Recovery Time Equivalent Test Circuit

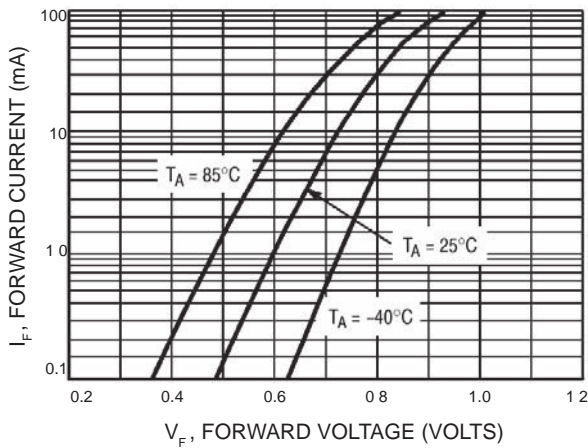


Figure 2. Forward Voltage

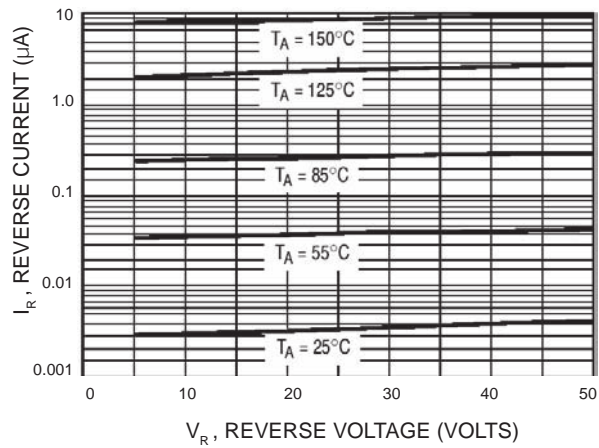


Figure 3. Leakage Current

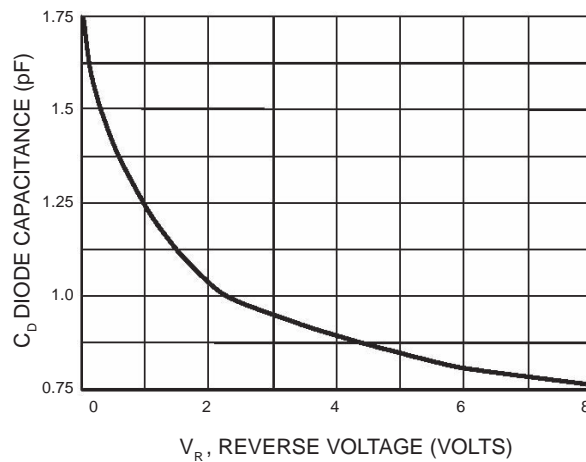
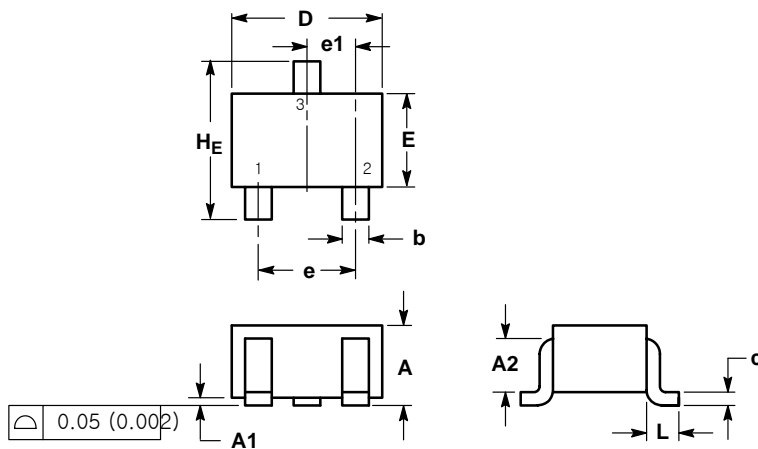


Figure 4. Capacitance

SC-70 (SOT-323)

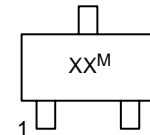


NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A2	0.7 REF			0.028 REF		
b	0.30	0.35	0.40	0.012	0.014	0.016
c	0.10	0.18	0.25	0.004	0.007	0.010
D	1.80	2.10	2.20	0.071	0.083	0.087
E	1.15	1.24	1.35	0.045	0.049	0.053
e	1.20	1.30	1.40	0.047	0.051	0.055
e1	0.65 BSC			0.026 BSC		
L	0.425 REF			0.017 REF		
HE	2.00	2.10	2.40	0.079	0.083	0.095

GENERIC MARKING DIAGRAM



- XX = Specific Device Code
- M = Date Code
- = Pb-Free Package

*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "▪", may or may not be present.

SOLDERING FOOTPRINT*

