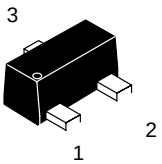
Monolithic Dual Switching Diode Common Anode

FEATURES

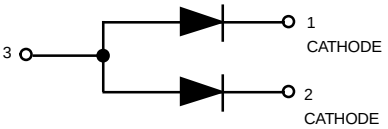
- We declare that the material of product compliance with RoHS requirements.



SOT-523

ORDERING INFORMATION

Device	Package	Shipping
FDS360	SOT-523	3000 Tape & Reel



MAXIMUM RATINGS (EACH DIODE)

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	80	Vdc
Forward Current	I_F	200	mAdc
Peak Forward Surge Current	$I_{FM(surge)}$	2	Adc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR– 4 Board, (1) T_A = 25°C Derate above 25°C	P_D	150 1.2	mW mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	833	°C/W
Total Device Dissipation FR- 4 Board(2), Ta= 25°C Derate above 25°C	P_D	200 1.6	mW mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	600	°C/W
Junction and Storage Temperature	T_J, T_{stg}	–55 to +150	°C

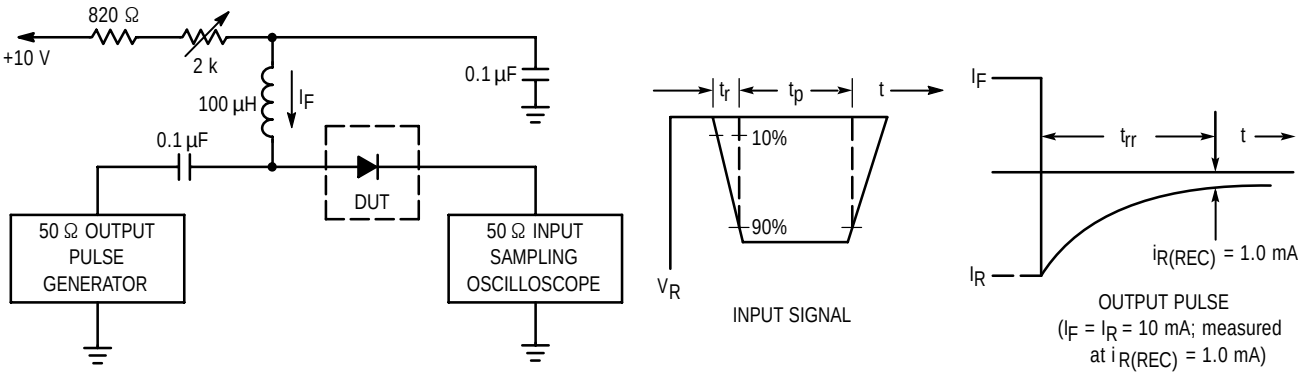
DEVICE MARKING

FDS360 = A3

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

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Reverse Breakdown Voltage ($I_{(BR)}$ = 100 µAdc)	$V_{(BR)}$	80	–	Vdc
Reverse Voltage Leakage Current (V_R = 30 Vdc) (V_R = 80 Vdc)	I_R	 – –	 0.1 0.5	µAdc
Diode Capacitance (V_R = 0, f = 1.0 MHz)	C_D	–	4.0	pF
Forward Voltage (I_F = 1.0 mAdc) (I_F = 10 mAdc) (I_F = 100 mAdc)	V_F	 – – –	 750 900 1200	mVdc
Reverse Recovery Time (I_F= I_R= 10 mAdc, $I_{R(REC)}$= 1.0 mAdc) (Figure 1) RL= 100Ω	t_{rr}	–	4.0	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.



Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (IF) of 10 mA.
2. Input pulse is adjusted so IR(peak) is equal to 10 mA.
3. tp≫trr

Figure 1. Recovery Time Equivalent Test Circuit

CURVES APPLICABLE TO EACH CATHODE

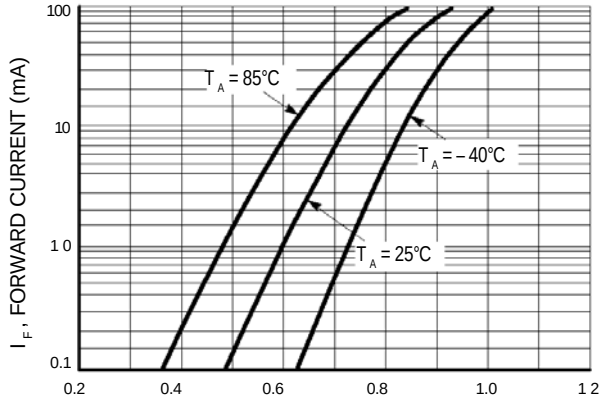


Figure 2. Forward Voltage

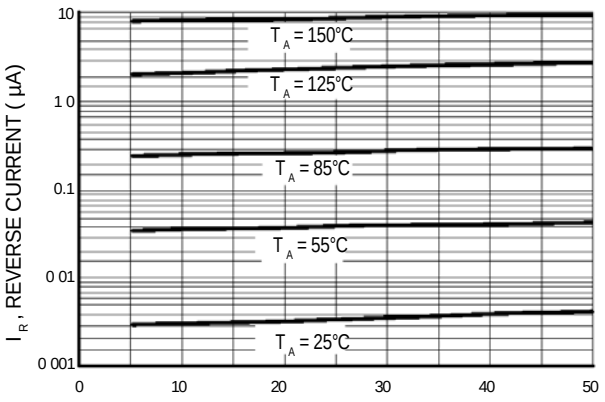


Figure 3. Leakage Current

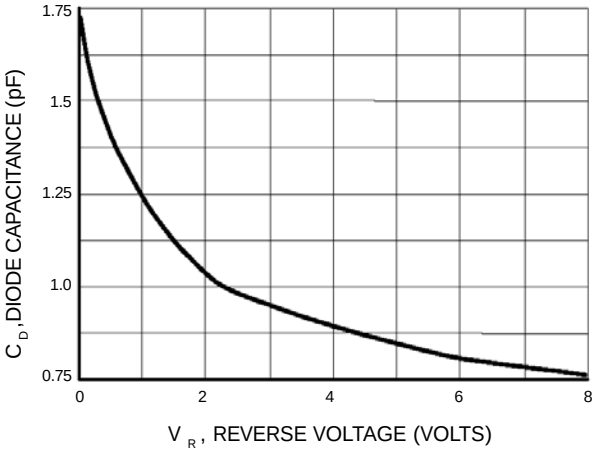
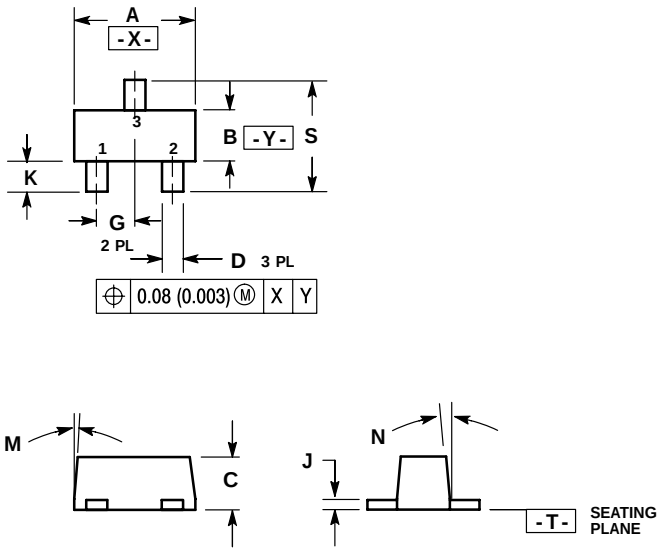


Figure 4. Capacitance

SOT-523

Dimension Outline:



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. 463C-01 OBSOLETE, NEW STANDARD 463C-02.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	1.50	1.60	1.70	0.059	0.063	0.067
B	0.75	0.85	0.95	0.030	0.034	0.040
C	0.60	0.70	0.80	0.024	0.028	0.031
D	0.23	0.28	0.33	0.009	0.011	0.013
G		0.50 BSC			0.020 BSC	
H		0.53 REF			0.021 REF	
J	0.10	0.15	0.20	0.004	0.006	0.008
K	0.30	0.40	0.50	0.012	0.016	0.020
L		1.10 REF			0.043 REF	
M	---	---	10°	---	---	10°
N	---	---	10°	---	---	10°
S	1.50	1.60	1.70	0.059	0.063	0.067

Soldering Footprint: