

Switching diode

- **Applications**

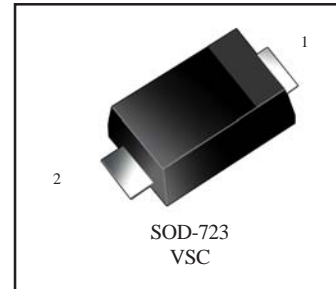
High speed switching

- **Features**

- 1) Extremely small surface mounting type.
- 2) High Speed. ($t_{rr} = 1.2\text{ns Typ.}$)
- 3) High reliability.

- **Construction**

Silicon epitaxial planar



- **Device Marking and Ordering Information**

Device	Marking	Shipping
FDS160VT1G	3	3000/Tape&Reel

ABSOLUTE MAXIMUM RATINGS ($T_a = 25\text{ C}$)

Parameter	Symbol	Limit	Unit
Peak reverse voltage	V_{RM}	90	V
DC reverse voltage	V_R	80	V
Peak forward current	I_{FM}	225	mA
Mean rectifying current	I_O	100	mA
Surge current (1s)	I_{surge}	500	mA
Junction temperature	T_J	125	C
Storage temperature	T_{sg}	- 55 ~ +125	C

ELECTRICAL CHARACTERISTICS ($T_a = 25\text{ C}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_F	-	-	1.2	V	$I_F=100\text{mA}$
Reverse current	I_R	-	-	0.1	μA	$V_R=80\text{V}$
Capacitance between terminals	C_T	-	0.72	3.0	pF	$V_R=0.5\text{V}$, $f=1\text{MHz}$
Reverse recovery time	t_{rr}	-	-	4	ns	$V_R=6\text{V}$, $I_F=10\text{mA}$, $R_L=100\Omega$

ELECTRICAL CHARACTERISTIC CURVES

($T_a = 25^\circ\text{C}$)

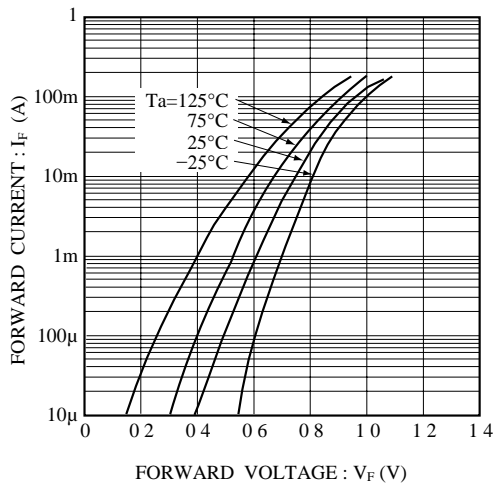


Fig.1 Forward characteristics

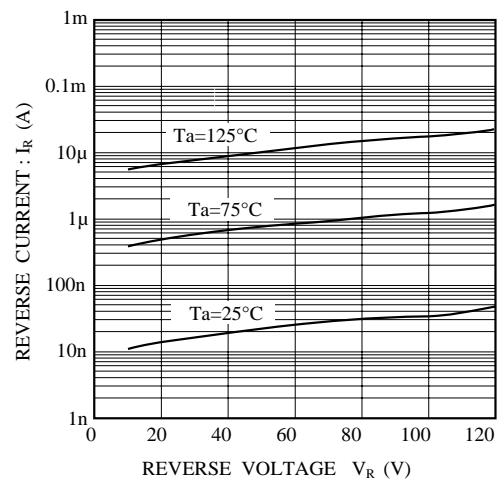


Fig.2 Reverse characteristics

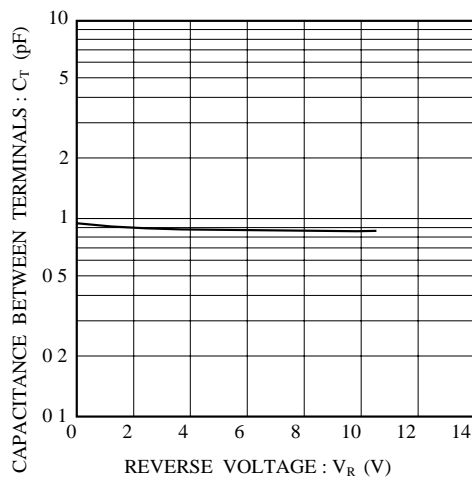


Fig.3 Capacitance between terminals characteristics

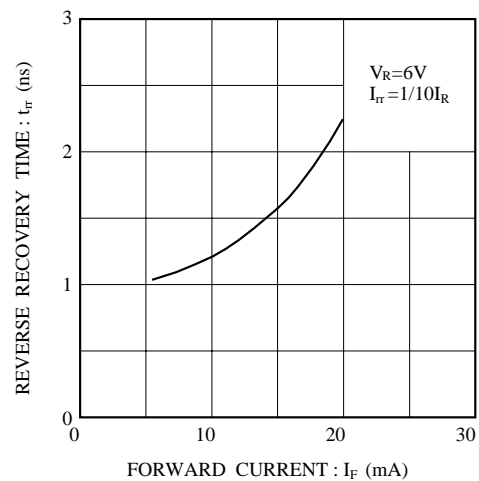


Fig.4 Reverse recovery time characteristics

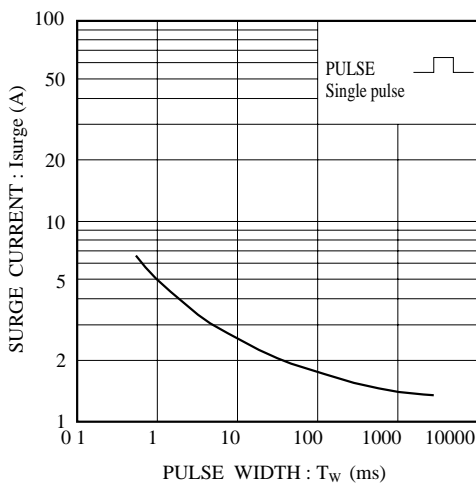


Fig.5 Surge current characteristics

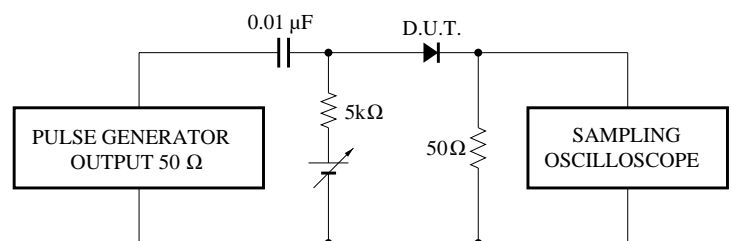
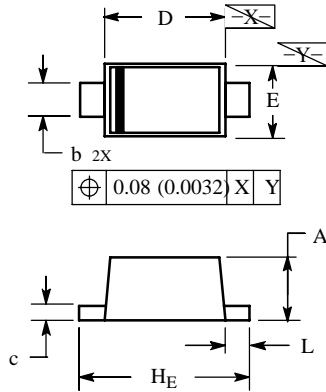


Fig.6 Reverse recovery time (t_{rr}) measurement circuit

SOD-723



NOTES:

- 1 DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982
- 2 CONTROLLING DIMENSION: MILLIMETER
- 3 MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.49	0.52	0.55	0.019	0.020	0.022
b	0.25	0.28	0.32	0.0098	0.011	0.013
c	0.08	0.12	0.15	0.0032	0.0047	0.0059
D	0.95	1.00	1.05	0.037	0.039	0.041
E	0.55	0.60	0.65	0.022	0.024	0.026
H_E	1.35	1.40	1.45	0.053	0.055	0.057
L	0.15	0.20	0.25	0.006	0.0079	0.010

SOLDERING FOOTPRINT*

