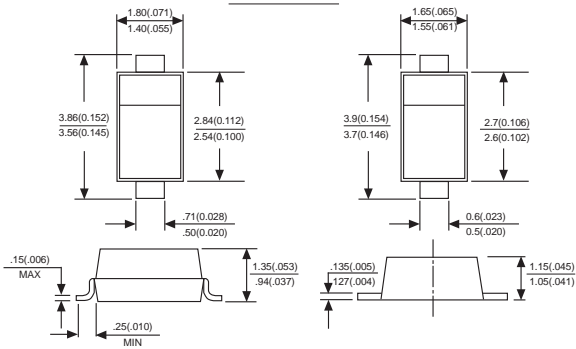


1N4148W

FAST SWITCHING DIODE

SOD-123



Dimensions in millimeters and (inches)

FEATURES

- ◆ Fast switching speed
- ◆ Surface mount package ideally suited for automatic insertion
- ◆ For general purpose switching applications
- ◆ High conductance

MECHANICAL DATA

Case: Molded plastic body

Terminals: Plated leads solderable per MIL-STD-750, Method 2026

Polarity: Polarity symbols marked on case

Marking: T5

Maximum ratings and electrical characteristics, Single diode @ $T_A=25^{\circ}\text{C}$

PARAMETER	SYMBOLS	W1/T4	UNITS
Peak repetitive peak reverse voltage	V_{RRM}	75	V
Working peak reverse voltage	V_{RWM}		
DC Blocking voltage	V_R		
RMS Reverse voltage	$V_{R(RMS)}$	53	V
Forward continuous current	I_{FM}	500	mA
Average rectified output current	I_o	250	mA
Peak forward surge current @=1.0us	I_{FSM}	4.0	A
@=1.0s		2.0	
Power dissipation	P_d	400	mW
Thermal resistance junction to ambient	$R_{\theta JA}$	315	K/W
Storage temperature	T_{STG}	-65 to +150	$^{\circ}\text{C}$
Non-Repetitive peak reverse voltage	V_{RM}	100	V

Electrical ratings @ $T_A=25^{\circ}\text{C}$

PARAMETER	SYMBOLS	Min.	Typ.	Max.	Unit	Conditions
Reverse breakdown voltage	$V_{(BR)R}$	75			V	$I_R=10\mu\text{A}$
Forward voltage	V_{F1}	0.62		0.72	V	$I_F=5\text{mA}$
	V_{F2}			0.855	V	$I_F=10\text{mA}$
	V_{F3}			1.0	V	$I_F=100\text{mA}$
	V_{F4}			1.25	V	$I_F=150\text{mA}$
Reverse current	I_{R1}			2.5	μA	$V_R=75\text{V}$
	I_{R2}			25	nA	$V_R=20\text{V}$
Capacitance between terminals	C_T			4	pF	$V_R=0\text{V}, f=1.0\text{MHz}$
Reverse recovery time	t_{rr}			4	ns	$I_F=I_R=10\text{mA}$ $I_{rr}=0.1 \times I_R, R_L=100\Omega$

RATINGS AND CHARACTERISTIC CURVES 1N4148W

FIG. 1- POWER DERATING CURVE

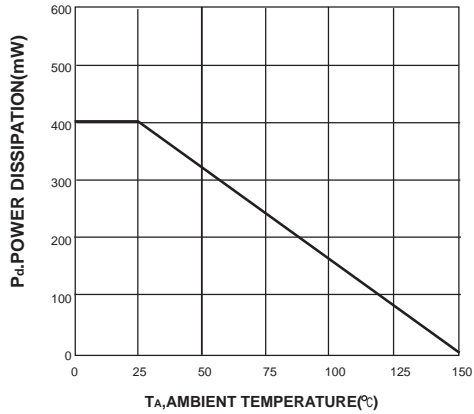


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

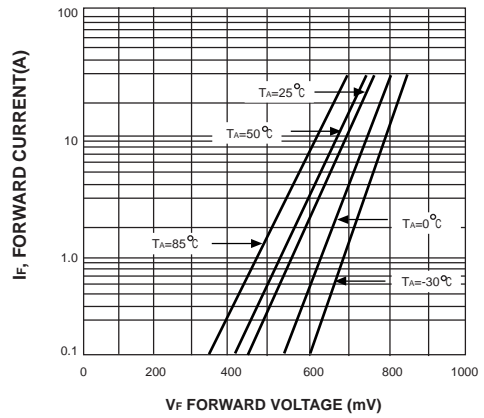


FIG. 3- TYPICAL REVERSE CHARACTERISTICS

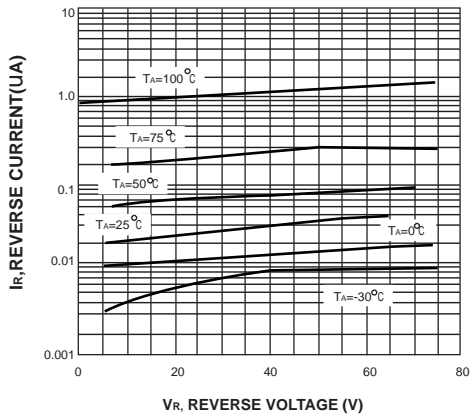


FIG. 4- REVERSE RECOVERY TIME VS FORWARD CURRENT

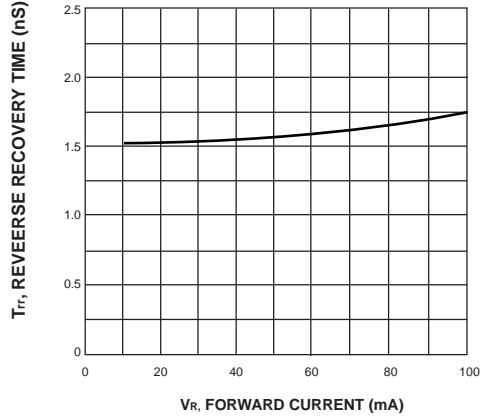


FIG. 5- TOTAL CAPACITANCE VS REVERSE VOLTAGE

