

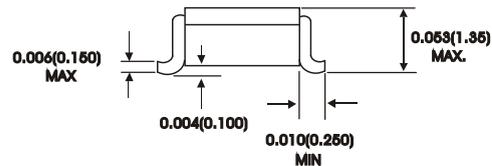
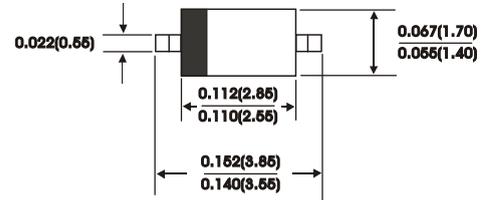


SMALL SIGNAL SWITCHING DIODE

SOD-123

FEATURES:

- Silicon epitaxial planar diode
- Fast switching diodes
- This diodes is also available in other case style including: the DO-25 case with the type designation 1N4148, the Mini-MELF case with the type designation LL4148, the SOD-323 case with the type designation 1N4148WS



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case: SOD-123 Plastic case
Weight: Approx. 0.02gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

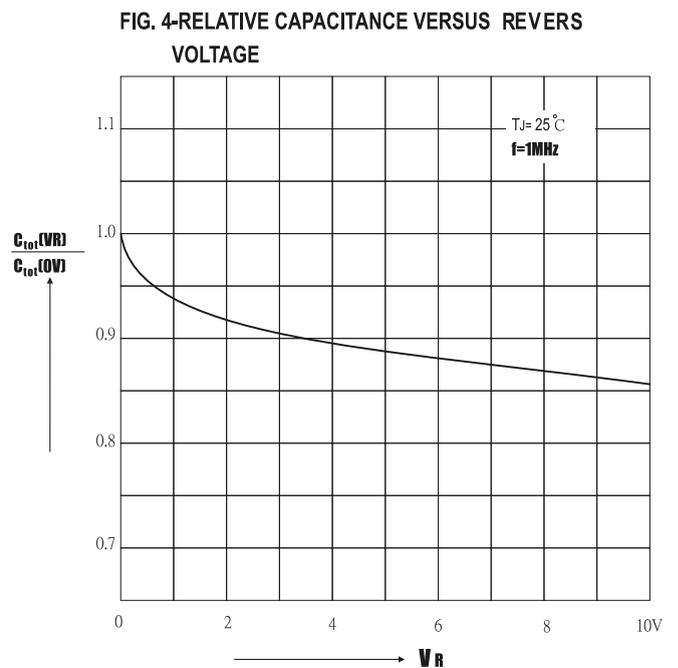
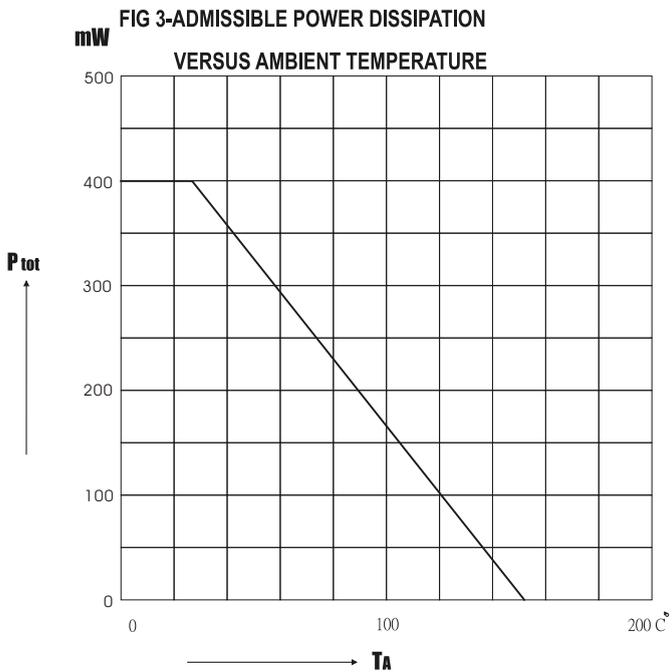
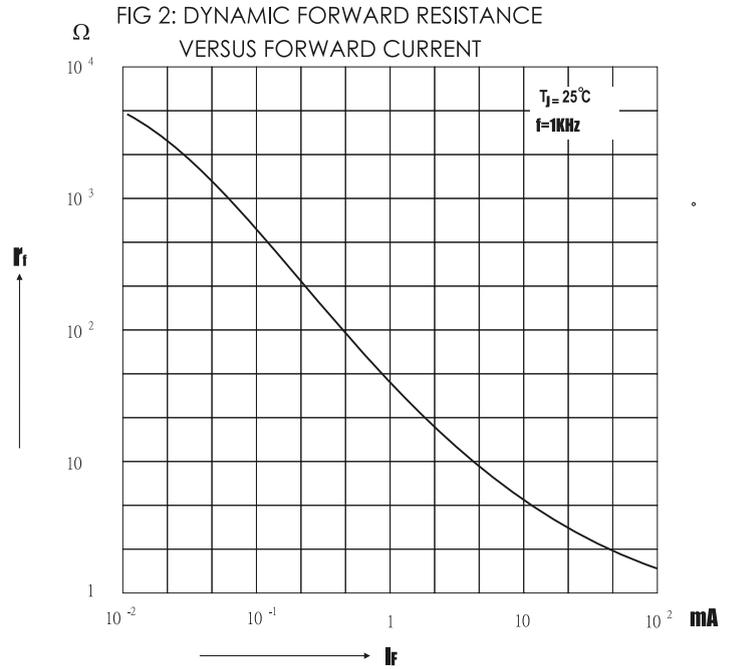
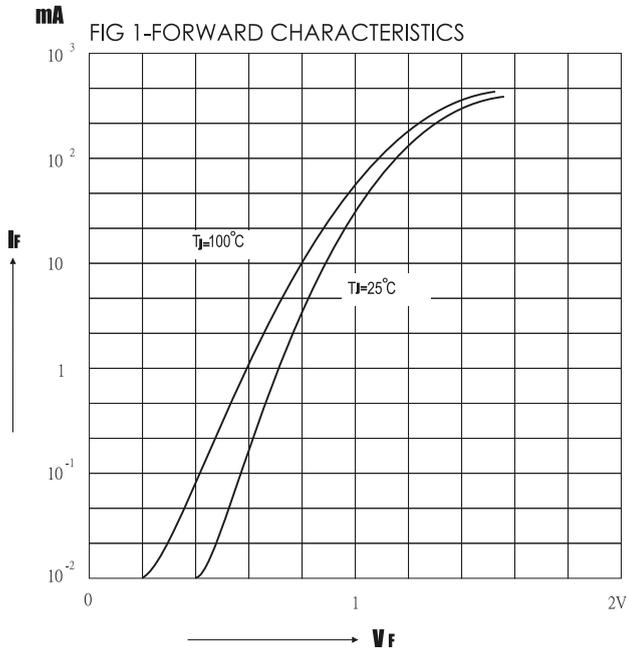
Rating at 25 °C ambient temp. unless otherwise specified.
Single phase, half sine wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20 %.

Characteristic	Symbol	1N4148W	Units
Maximum peak reverse voltage	V_{RM}	100	Volts
Maximum reverse voltage	V_R	75	Volts
Average rectified current .half wave rectification with Resistive load at $T_a=25^\circ C$ And $F \geq 50HZ$	$I_{O(AV)}$	0.15 ¹⁾	Amps
Peak forward surge current, < 1S single half sine-wave auperimposed on rated load $T_a=25^\circ C$	I_{FSM}	0.5	Amps
Power dissipation at $T_a=25^\circ C$	P_{tot}	400 ¹⁾	mW
Maximum instantaneous forward voltage drop per leg at 0.01A	V_F	1.0	Volts
Maximun Voltage rise when switching ON tested with 50mA pulse $t=0.1, S$, Rise time < 30. S , $f=5$ to 100 KHZ	V_{fr}	2.5	Volts
Maximun leakage current At $V_R=20V$ At $V_R=75V$ At $V_R=20V T_a=150^\circ C$	I_R	25 5 50	nA uA uA
Maximum Reverse recovery time (Note 1)	TRR	4	ns
Maximun junction capacitance $V_R=V_F=0V$	C_{tot}	4	pF
Maximun Thermal resistance junction to ambient	$R_{th JA}$	450 ¹⁾	K /W
MINMUN rectification efficiency at $f=100MHZ$, $V_{RF}=2V$	η	0.45	
Operating temperature range	T_J	150	°C
storage temperature range	T_{stg}	-55 to +150	°C

NOTES:
(1) Reverse recovery condition $I_F=0.01A$, $I_R=0.001A$, $V_R=6V$, $R_L=100 \Omega$
1): Valid provided that electrodes are kept at ambient temperature



RATINGS AND CHARACTERISTIC CURVES





RATINGS AND CHARACTERISTIC CURVES

FIG.5 RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT

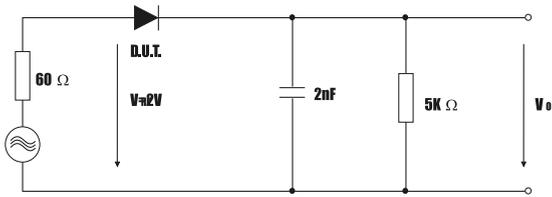


FIG 6: LEAKAGE CURRENT VERSUS JUNCTION TEMPERATURE

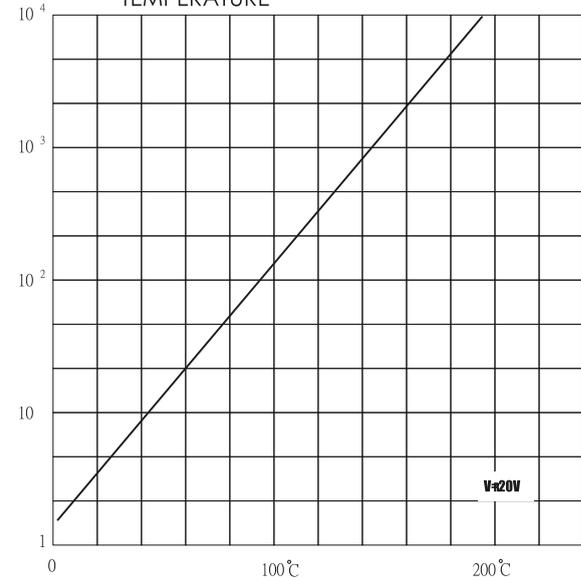
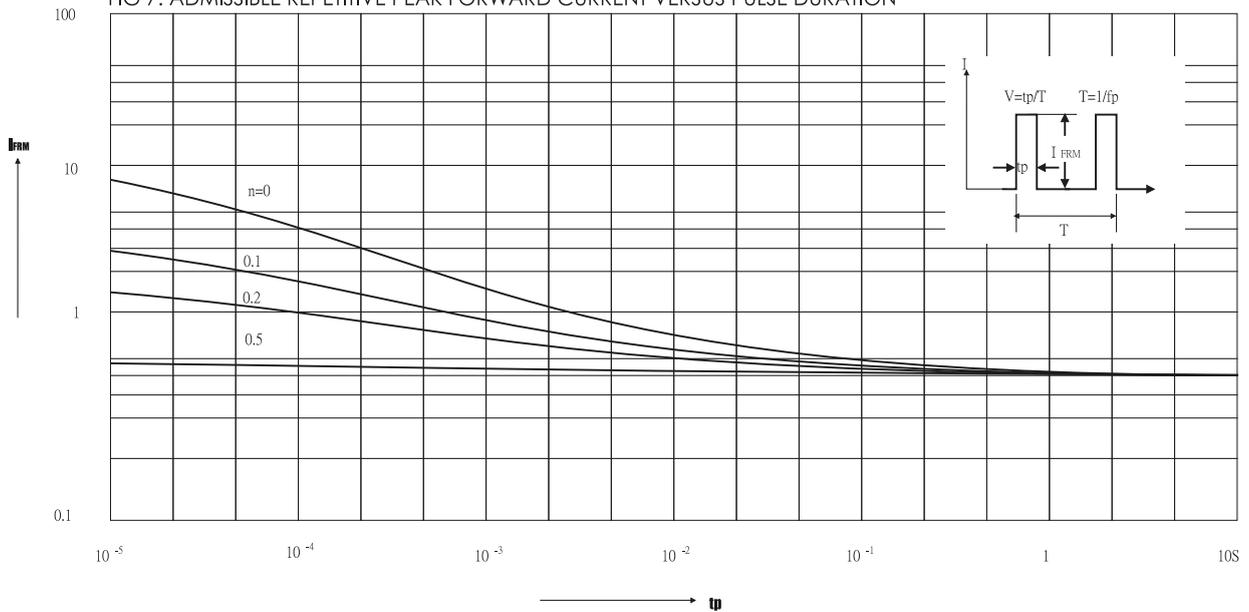


FIG 7: ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION





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