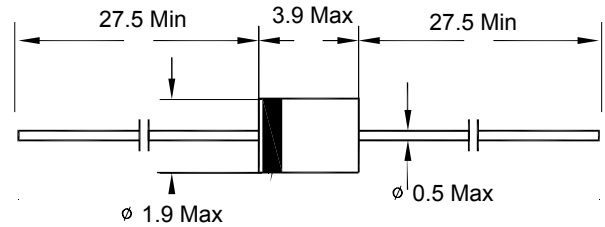


FAST SWITCHING DIODES

FEATURES

- Silicon epitaxial planar diode
- High speed switching diode
- 500 mW power dissipation
- These diodes are also available in glass case DO-34. Mini-MELF

1N4148



DO-35 Dimensions in millimeters

MECHANICAL DATA

- Weight: 0.004 ounces, 0.13 grams
- Case: DO-35, glass case
- Polarity: Color band denotes cathode

Absolute Maximum Ratings (TA=25°C unless otherwise noted)

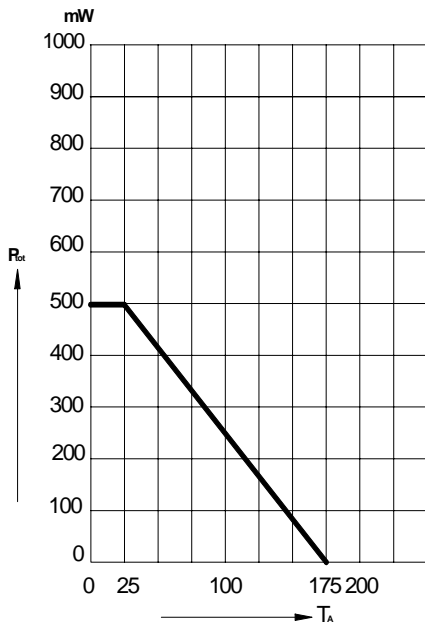
Parameter	Symbol	Value	Unit
Reverse voltage	V_R	75	v
Peak reverse voltage	V_{RM}	100	v
Average Rectified Current	I_O	150	mA
Non-repetitive Peak Forward Current	I_{FSM}	500 ¹⁾	mA
Power dissipation at $T_{amb}=25^\circ C$	P_{tot}	500	mW
Junction temperature	T_J	175	°C
Storage temperature range	T_{STG}	-55-175	°C

1)Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.

ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Forward voltage @ $I_F=10mA$	V_F			1.0	v
Leakage current	at $V_R=20V$	I_R		25	nA
	at $V_R=75V$	I_R		5	uA
	at $V_R=20V$ $T_J=150^\circ C$	I_R		50	uA
Capacitance at $V_F=V_R=0V$	C_{tot}			4	pF
Voltage rise when switching on tested with 50mA pulses $t_p=0.1\mu s$, rise time < 30ns, $f_p=5$ to 100KHz	V_{fr}			2.5	V
Reverse recovery time from $I_F=10mA$ $V_R=6V, R_L=100$, at $I_R=1mA$	t_{rr}			4.0	nS
Thermal resistance junction to ambient	R_{JA}			350	K/W
Rectification efficiency at 100MHz, $V_{RF}=2V$	η_V	0.45			

1N4148 Typical Characteristics



AMBIENT TEMPERATURE

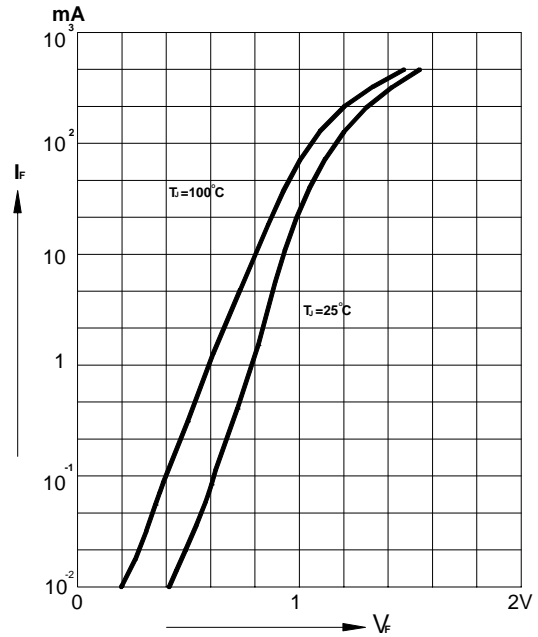


FIG.2- FORWARD CHARACTERISTICS

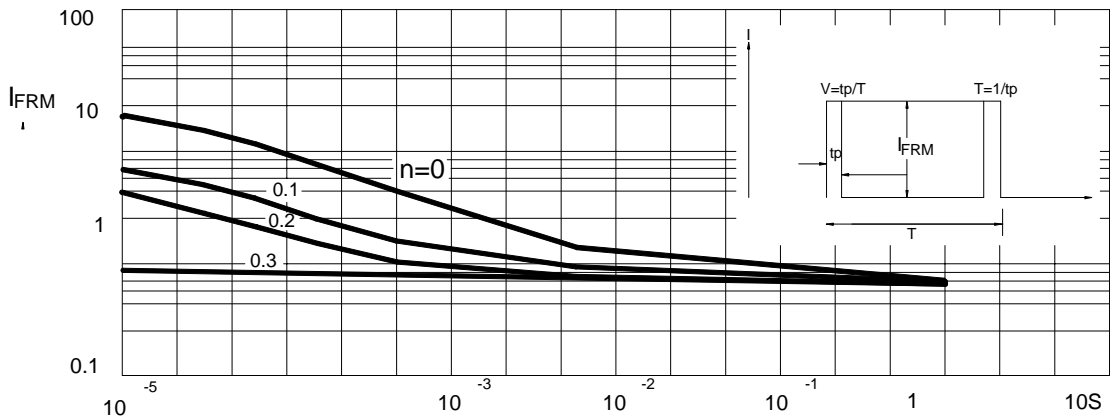


FIG.3-ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION