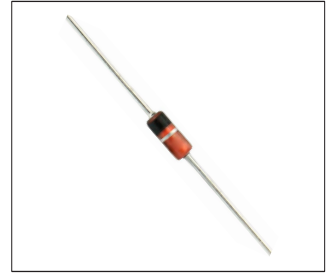


FAST SWITCHING DIODES**FEATURES**

- High Performance and Reliability best suited for Automotive application
- Silicon Epitaxial Planar Diode
- Fast switching diode
- This diode is also available in other case styles including: the SOD-123 case with the type designation 1N4448W, the MiniMELF case with the type designation LL4448, and the SOT23 case with the type designation

**MECHANICAL DATA**

- Case: DO-35
- Weight: approx: 0.13gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified

Parameter	Symbol	Value	Unit
Reverse Voltage	V_R	75	V
Peak Reverse Voltage	V_{RM}	100	V
Rectified Current (Average) Half Wave Rectification with Resist. Load at $T_{amb} = 25\text{ }^\circ\text{C}$ and $f \geq 50\text{ Hz}$	I_0	150 ¹⁾	mA
Surge Forward Current at $t < 1\text{ s}$ and $T_j = 25\text{ }^\circ\text{C}$	I_{FSM}	500	mA
Power Dissipation at $T_{amb} = 25\text{ }^\circ\text{C}$	P_{tot}	500 ¹⁾	mW
Junction Temperature	T_j	175	°C
Storage Temperature Range	T_S	-65 to +175	°C

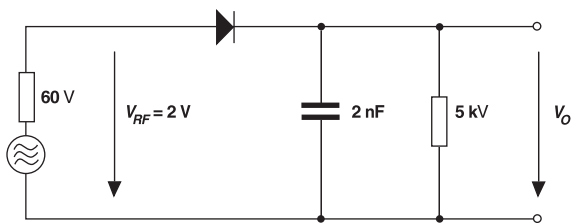
¹⁾ Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature (DO-35)

FAST SWITCHING DIODES

ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

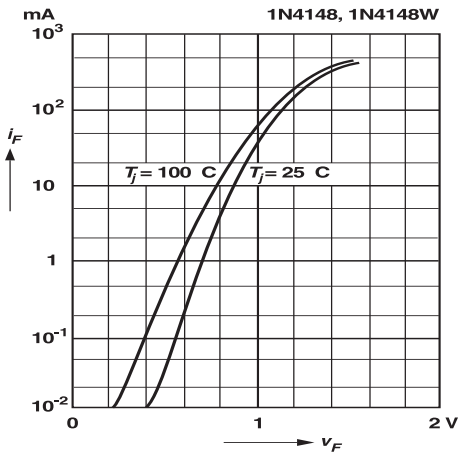
Parameter	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage at $I_F = 10 \text{ mA}$	V_F	–	–	1	V
Leakage Current at $V_R = 20 \text{ V}$ at $V_R = 75 \text{ V}$ at $V_R = 20 \text{ V}, T_j = 150 \text{ }^\circ\text{C}$	I_R I_R I_R	– – –	– – –	25 5 50	nA μA μA
Capacitance at $V_F = V_R = 0 \text{ V}$	C_{tot}	–	–	4	pF
Voltage Rise when Switching ON tested with 50 mA Pulses $t_p = 0.1 \text{ } \mu\text{s}$, Rise Time < 30 ns, $f_p = 5 \text{ to } 100 \text{ kHz}$	V_{fr}	–	–	2.5	V
Reverse Recovery Time from $I_F = 10 \text{ mA}$ to $I_R = 1 \text{ mA}$, $V_R = 6 \text{ V}$, $R_L = 100 \text{ } \Omega$	t_{rr}	–	–	4	ns
Thermal Resistance Junction to Ambient Air	R_{thJA}	–	–	350 ¹⁾	K/W
Rectification Efficiency at $f = 100 \text{ MHz}$, $V_{\text{RF}} = 2 \text{ V}$	η_v	0.45	–	–	–
1) Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature (DO-35)					


Rectification Efficiency Measurement Circuit

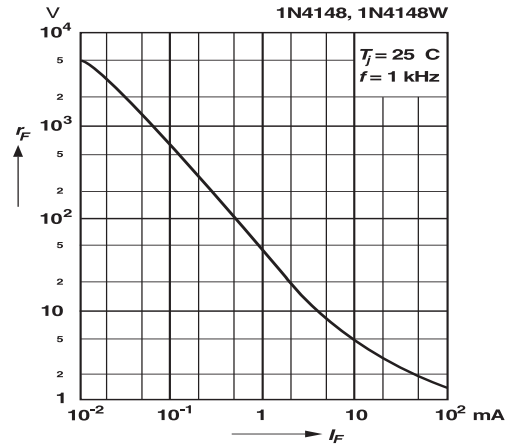
FAST SWITCHING DIODES

RATINGS AND CHARACTERISTIC CURVES 1N4148

Forward characteristics

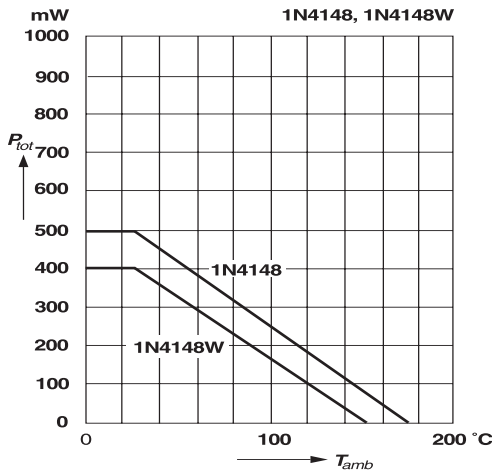


Dynamic forward resistance versus forward current

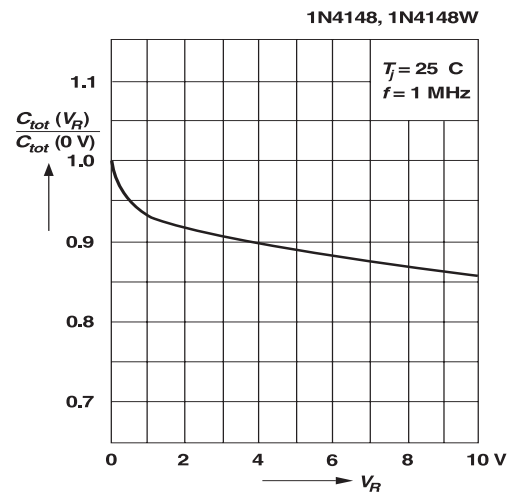


Admissible power dissipation versus ambient temperature

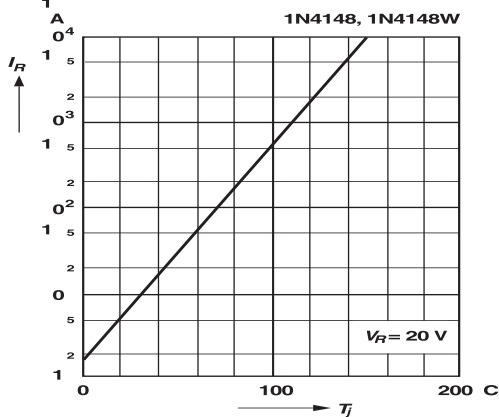
For conditions, see footnote in table "Absolute Maximum Ratings"



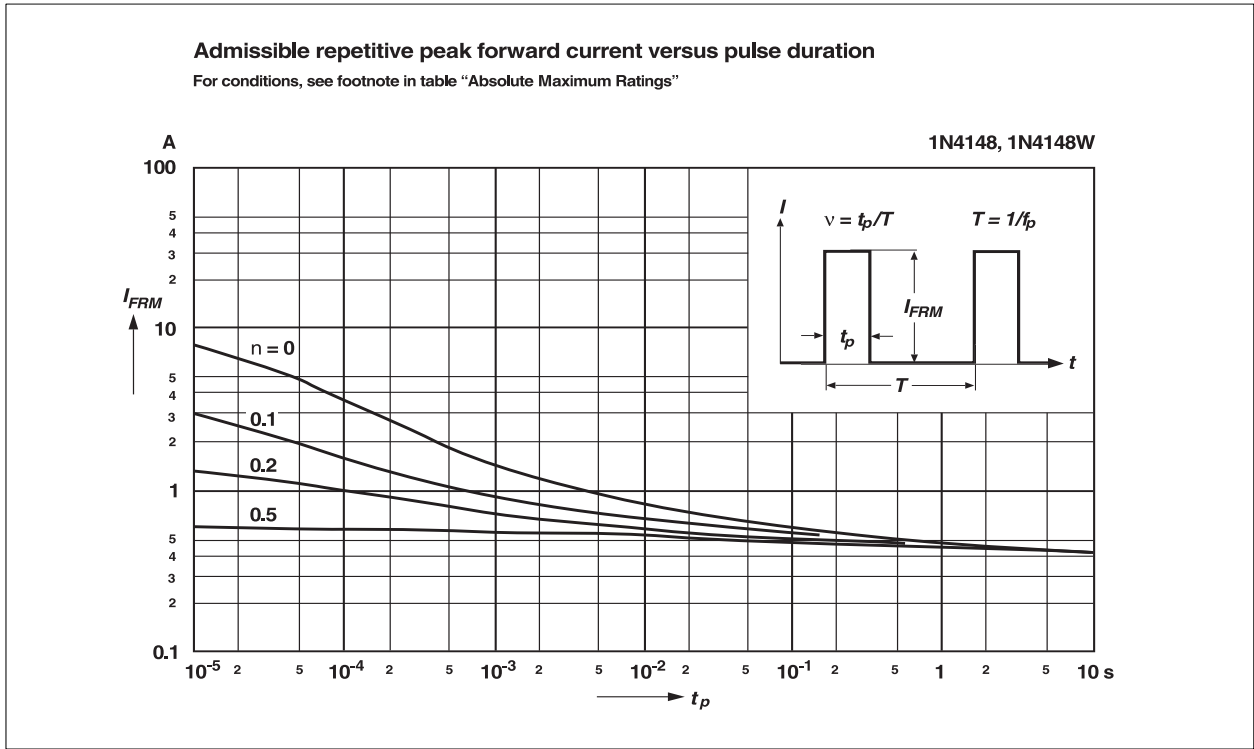
Relative capacitance versus reverse voltage



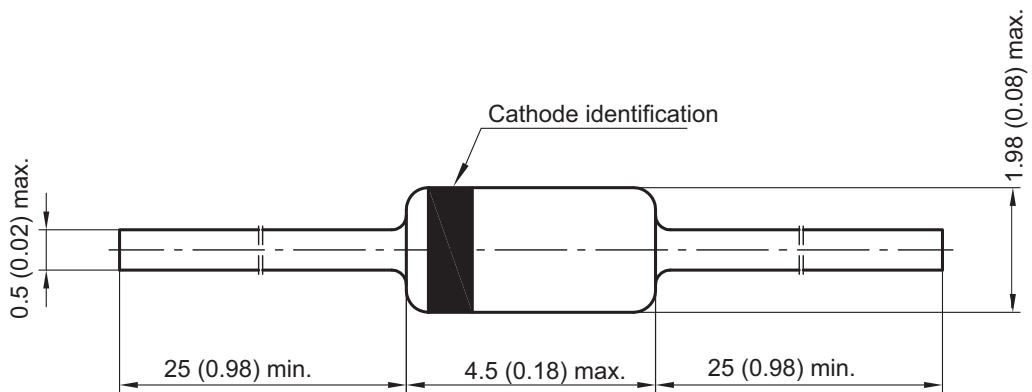
Leakage current versus junction temperature



FAST SWITCHING DIODES



PACKAGE DIMENSIONS in millimeters (inches):



Disclaimer

All product, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.