

## 1N4448

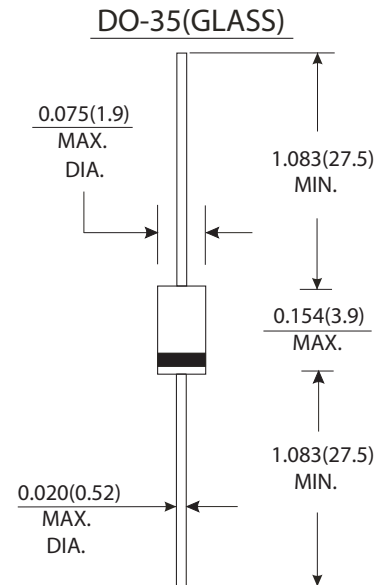
### SMALL SIGNAL SWITCHING DIODES

#### Features

- Silicon epitaxial planar diode
- Fast switching diodes
- 500mW power dissipation
- This diode is also available in the Mini-MELF case with the type designation LL4448

#### Mechanical Data

- Case: DO-35 glass case
- Weight: Approx. 0.13 gram



Dimensions in inches and (millimeters)

#### Maximum Ratings And Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified)

	Symbol	Value	Units
Reverse Voltage	V <sub>R</sub>	75	Volts
Peak Reverse Voltage	V <sub>RM</sub>	100	Volts
Average rectified current, Half wave rectification with Resistive load at T <sub>A</sub> =25°C and F≥50Hz	I <sub>AV</sub>	150 <sup>1)</sup>	mA
Surge forward current at t<1S and T <sub>J</sub> =25°C	I <sub>FSM</sub>	500	mA
Power dissipation at T <sub>A</sub> =25°C	P <sub>tot</sub>	500 <sup>1)</sup>	mW
Junction temperature	T <sub>J</sub>	175	°C
Storage temperature range	T <sub>STG</sub>	-65 to +175	°C

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

#### Electrical characteristics

(Ratings at 25°C ambient temperature unless otherwise specified)

	Symbols	Min.	Typ.	Max.	Units
Forward voltage at I <sub>F</sub> =5mA	V <sub>F</sub>			0.72	V
at I <sub>F</sub> =10mA	V <sub>F</sub>			1	V
Leakage current at V <sub>R</sub> =20V	I <sub>R</sub>			25	nA
at V <sub>R</sub> =75V	I <sub>R</sub>			5	μA
at V <sub>R</sub> =20V, T <sub>J</sub> =150°C	I <sub>R</sub>			50	μA
Junction Capacitance at V <sub>R</sub> =V <sub>F</sub> =0V	C <sub>J</sub>			4	pF
Reverse breakdown voltage tested with 100μA Pulse	V(BR)R	100			V
Reverse Recovery time from I <sub>F</sub> =10mA to I <sub>R</sub> =1mA, V <sub>R</sub> =6V, R <sub>L</sub> =100Ω	trr			4	ns
Thermal resistance, junction to Ambient	RθJA			350 <sup>1)</sup>	K/W
Rectification efficiency at f=100MHz, V <sub>RF</sub> =2V	η	0.45			

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

## RATINGS AND CHARACTERISTIC CURVES 1N4448

FIG.1-FORWARD CHARACTERISTICS

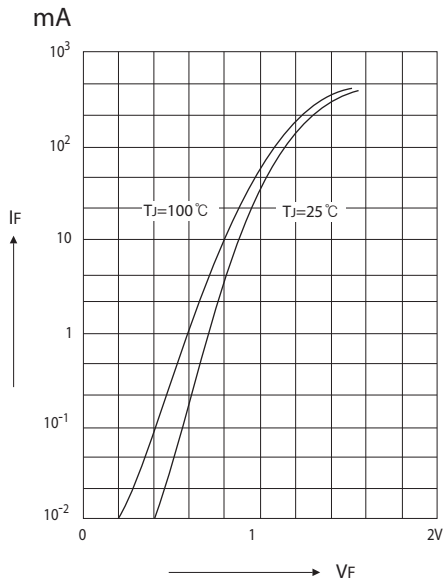


FIG.2- DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT

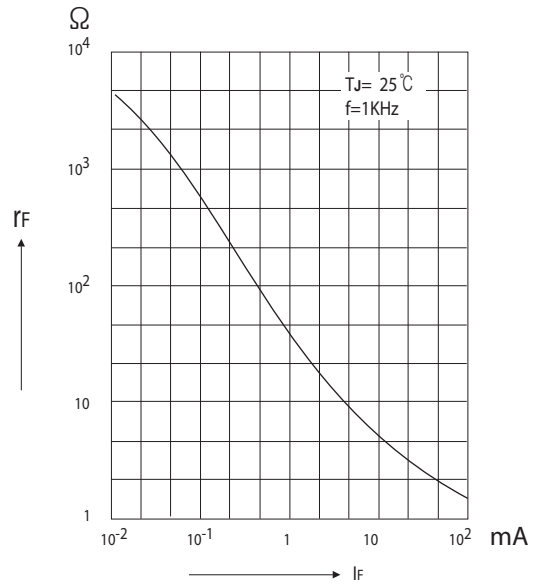


FIG.3-ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE

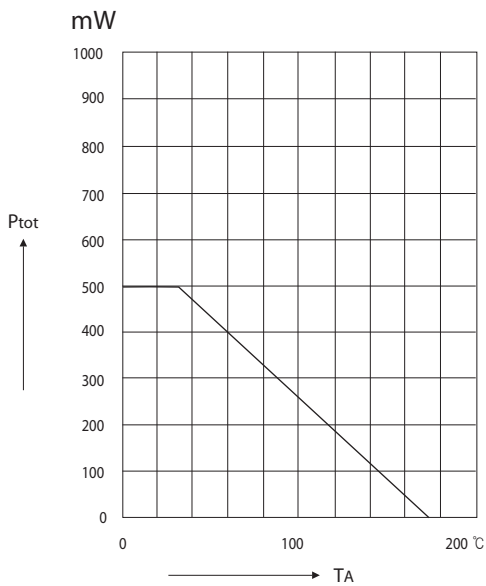
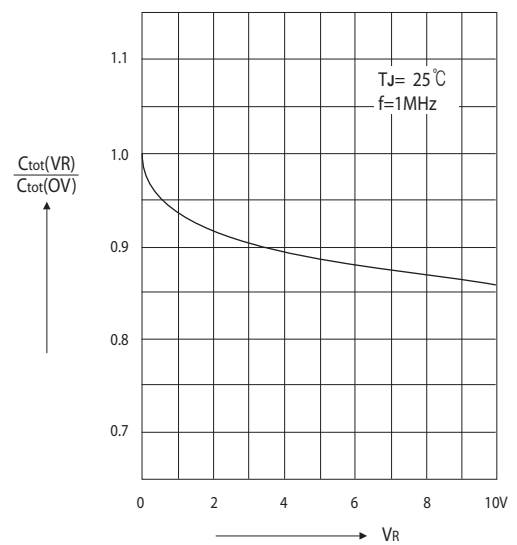


FIG. 4-RELATIVE CAPACITANCE VERSUS VOLTAGE



## RATINGS AND CHARACTERISTIC CURVES 1N4448

FIG.5 - RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT

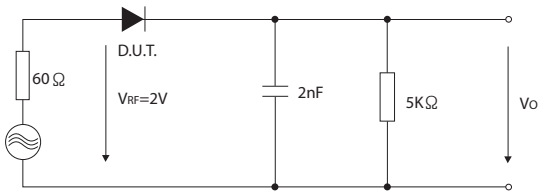


FIG.6 - LEAKAGE CURRENT VERSUS JUNCTION TEMPERATURE

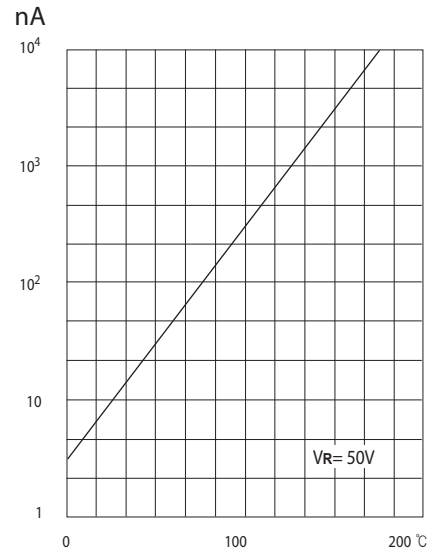


FIG.7 - ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

