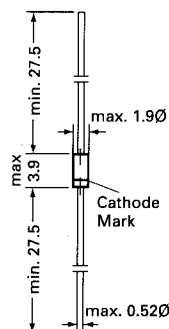


1N 4448

SILICON EPITAXIAL PLANAR DIODE

Silicon Epitaxial Planar Diode
fast switching diode.

This diode is also available in MiniMELF case with type designation LL4448.



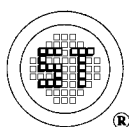
Glass case JEDEC DO-35

Dimensions in mm

Absolute Maximum Ratings ($T_a = 25\text{ }^{\circ}\text{C}$)

	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_o	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	200	$^{\circ}\text{C}$
Storage Temperature Range	T_s	-65 to + 200	$^{\circ}\text{C}$

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



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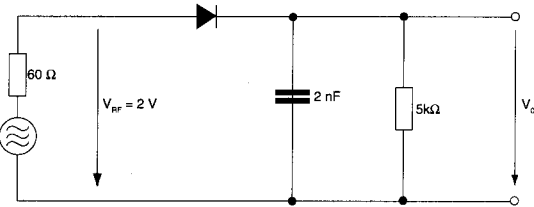


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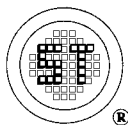
SILICON EPITAXIAL PLANAR DIODE

Characteristics at $T_j = 25\text{ }^{\circ}\text{C}$

	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage at $I_F = 5\text{ mA}$ at $I_F = 100\text{ mA}$	V_F V_F	0.62 -	- -	0.72 1	V 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
Reverse Breakdown Voltage tested with $100\text{ }\mu\text{A}$ Pulses	$V_{(BR)R}$	100	-	-	V
Capacitance at $V_F = V_R = 0$	C_{tot}	-	-	4	pF
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_{thA}	-	-	0.35 ¹⁾	K/mW
Rectification Efficiency at $f = 100\text{ MHz}$, $V_{RF} = 2\text{ V}$	η_V	0.45	-	-	ns
¹⁾ Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature					



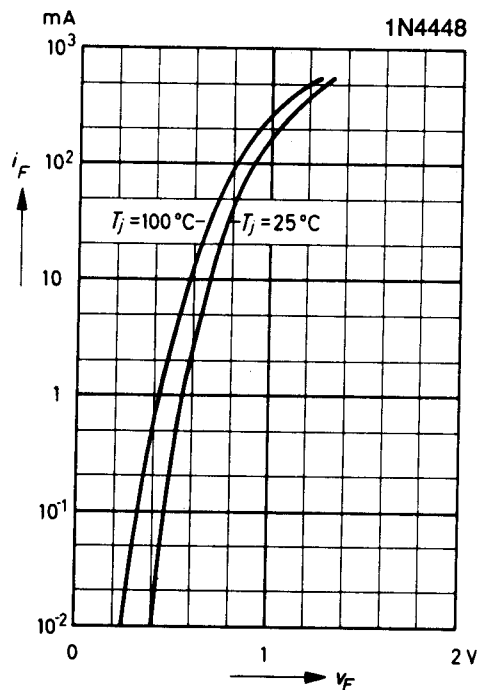
Rectification Efficiency Measurement Circuit



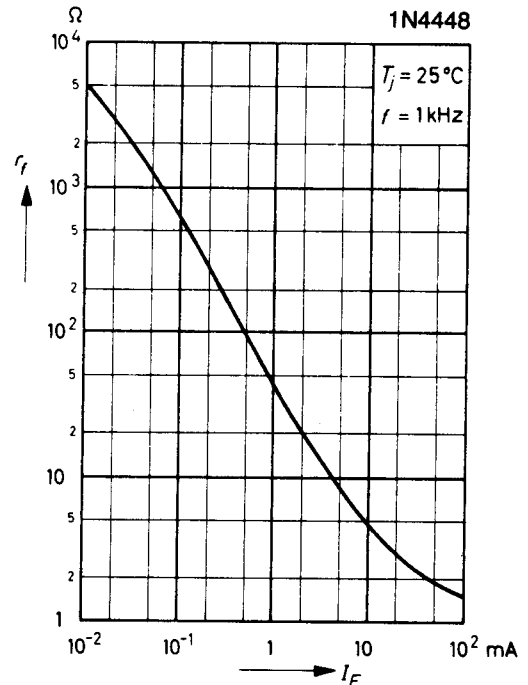
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SILICON EPITAXIAL PLANAR DIODE

Forward characteristics

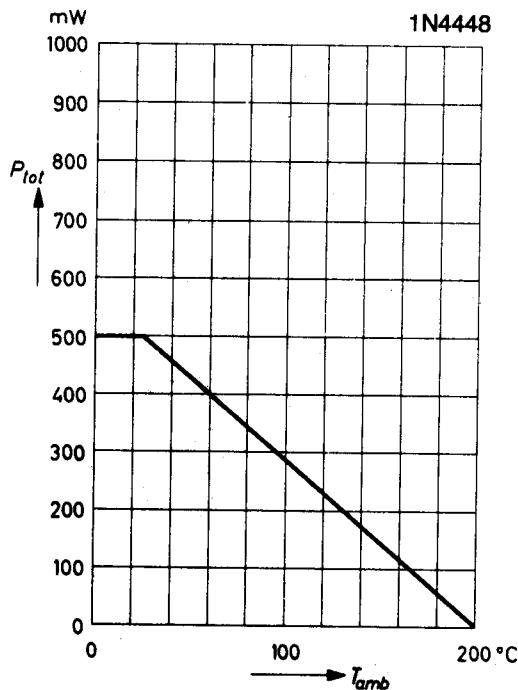


Dynamic forward resistance versus forward current

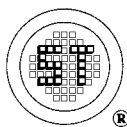
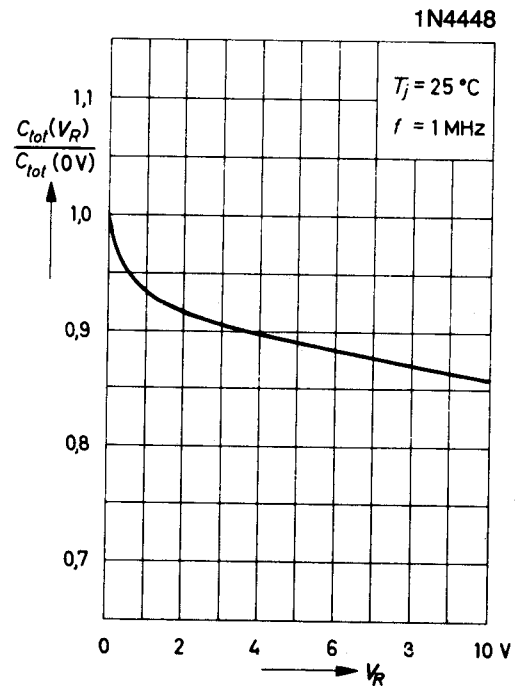


Admissible power dissipation versus ambient temperature

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



Relative capacitance versus reverse voltage



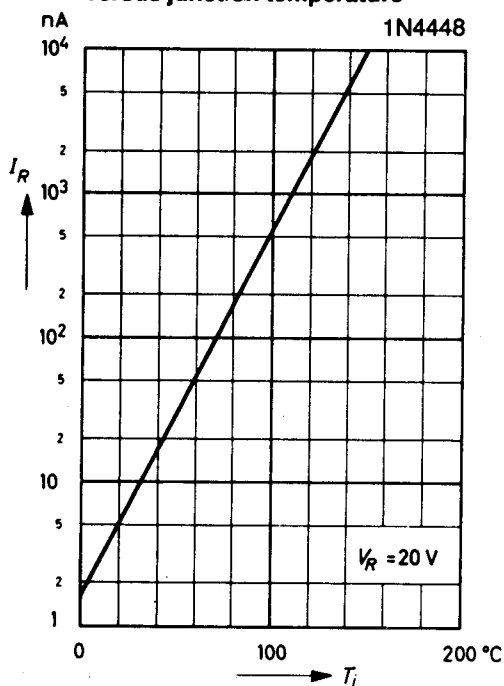
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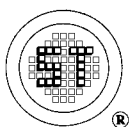
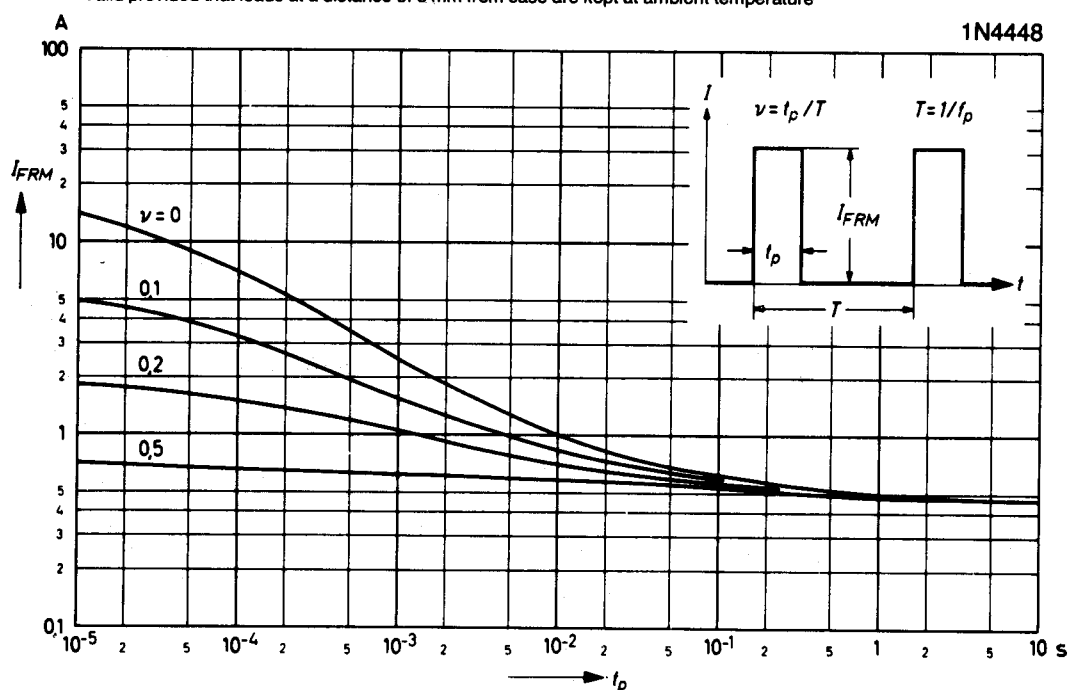
1N 4448 SILICON EPITAXIAL PLANAR DIODE

**Leakage current
versus junction temperature**



Admissible repetitive peak forward current versus pulse duration

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



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