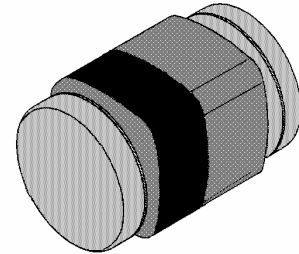


SILICON EPITAXIAL PLANAR DIODE

LS-31

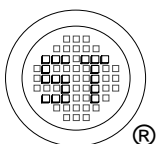
fast switching diode in MiniMELF case especially suited for automatic surface mounting.



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

	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 $T_{amb} = 25^\circ\text{C}$ and $f/50\text{ Hz}$	I_O	150 ¹⁾	mA
Surge Forward Current at $t < 1\text{s}$ and $T_j = 25^\circ\text{C}$	I_{FSM}	500	mA
Power Dissipation	P_{tot}	500 ¹⁾	mW
Junction Temperature	T_j	175	$^\circ\text{C}$
Storage Temperature Range	T_S	-65 to +175	$^\circ\text{C}$

¹⁾ Valid provided that electrodes are kept at ambient temperature.



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ISO/TS 16949 : 2002
Certificate No. 05103



ISO 14001:2004
Certificate No. 71116



ISO 9001:2000
Certificate No. 0506098

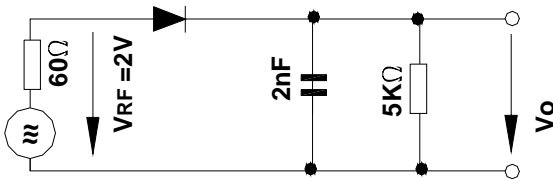
Dated : 17/01/2005

MCL4448

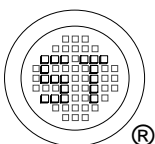
Characteristics at $T_j = 25^\circ\text{C}$

	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 $V_R = 20\text{V}$, $T_j = 150^\circ\text{C}$	I_R I_R I_R	- - -	- - -	25 5 50	nA μA μA
Reverse Breakdown Voltage tested with $100\mu\text{A}$ 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 $I_R = 1\text{mA}$, $V_R = 6\text{V}$, $R_L = 100\Omega$	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 electrodes are kept at ambient temperature.



Rectification Efficiency Measurement Circuit



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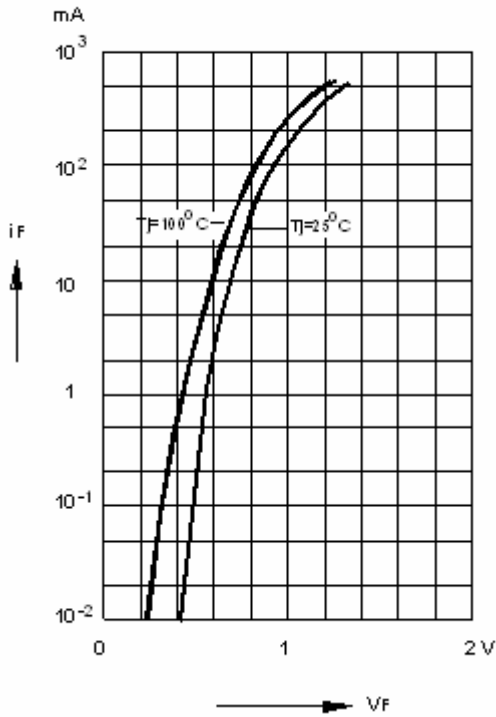


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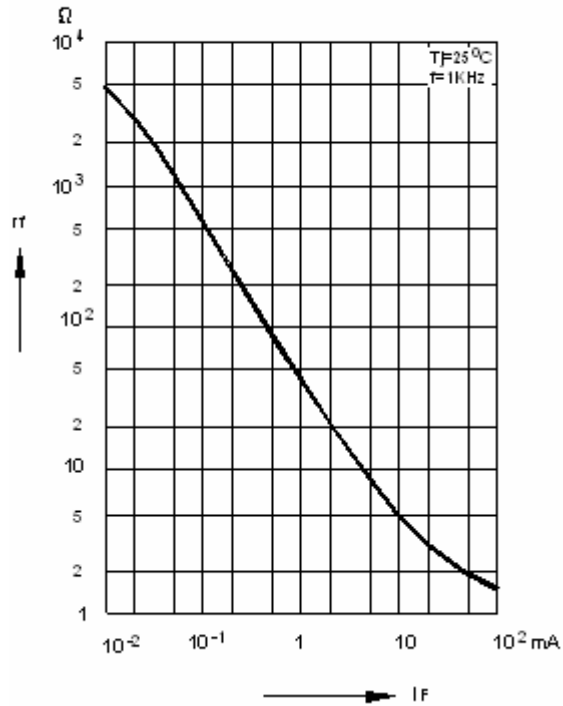
Dated : 17/01/2005

MCL4448

Forward characteristics

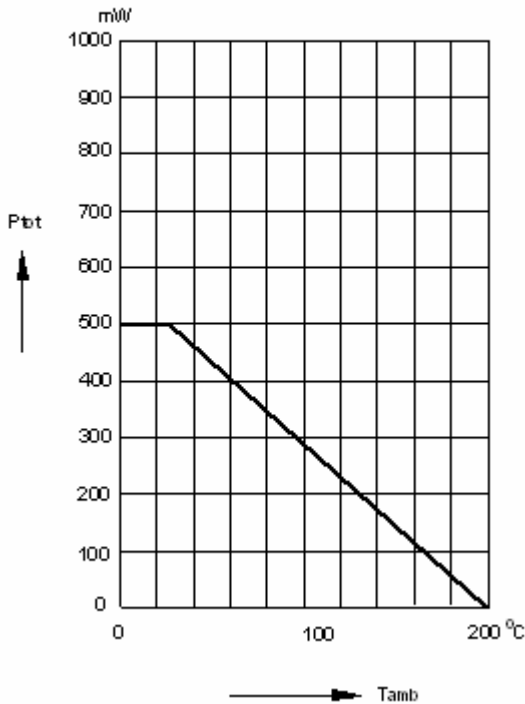


Dynamic forward resistance versus forward current

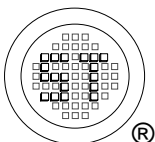
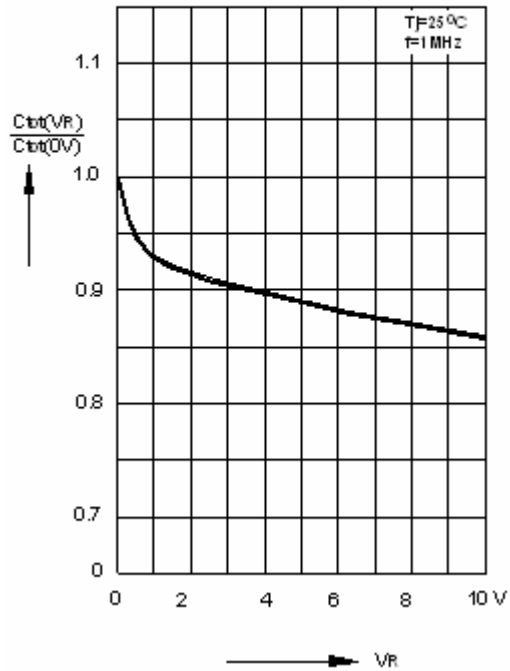


Admissible power dissipation versus ambient temperature

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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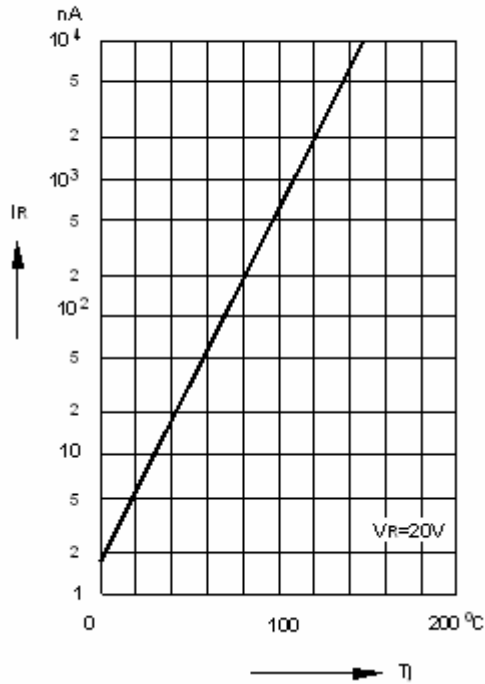
ISO 14001:2004
Certificate No. 7116



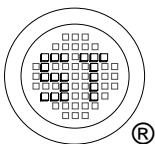
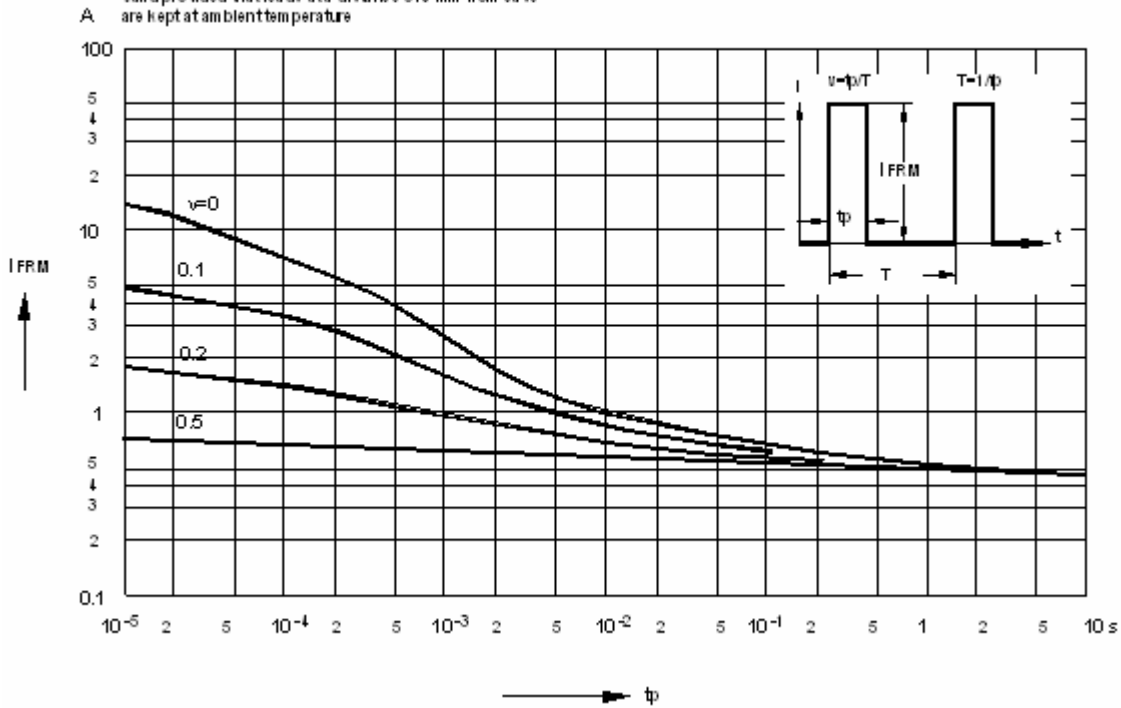
ISO 9001:2000
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Leakage current
versus junction temperature



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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