

## FAST SWITCHING DIODES

### FEATURES

Silicon epitaxial diode  
500mW power dissipation  
High speed switching diode

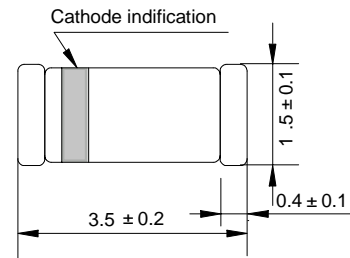
### MECHANICAL DATA

Polarity: Color band denotes cathode

Case: LL-34 glass case

Weight: Approx 0.031 grams

### LL4148



LL-34(SOD-80) Dimensions in millimeters

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

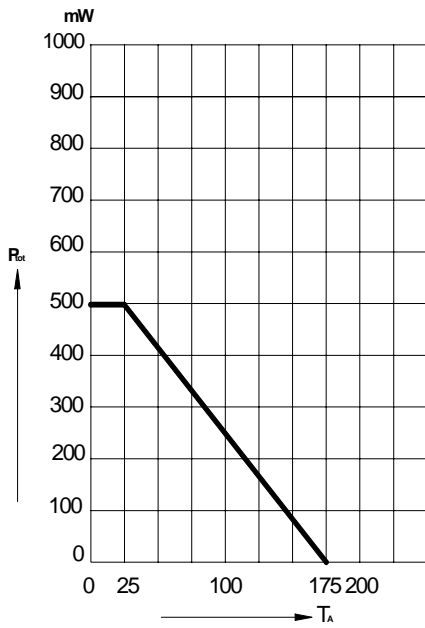
Parameter	Symbol	Value	Unit
Reverse voltage	$V_R$	75	v
Peak reverse voltage	$V_{RM}$	100	v
Average Rectified Current	$I_O$	150	mA
Non-repetitive Peak Forward Current	$I_{FSM}$	500 <sup>1)</sup>	mA
Power dissipation at $T_{amb}=25^\circ\text{C}$	$P_{tot}$	500	mW
Junction temperature	$T_J$	175	°C
Storage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

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

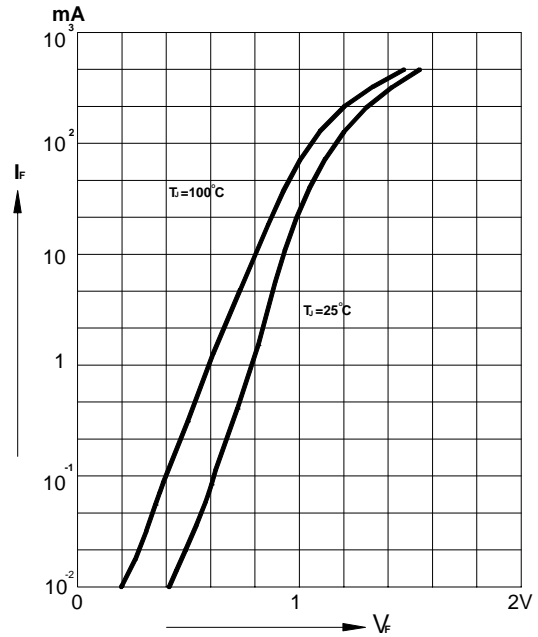
### ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

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

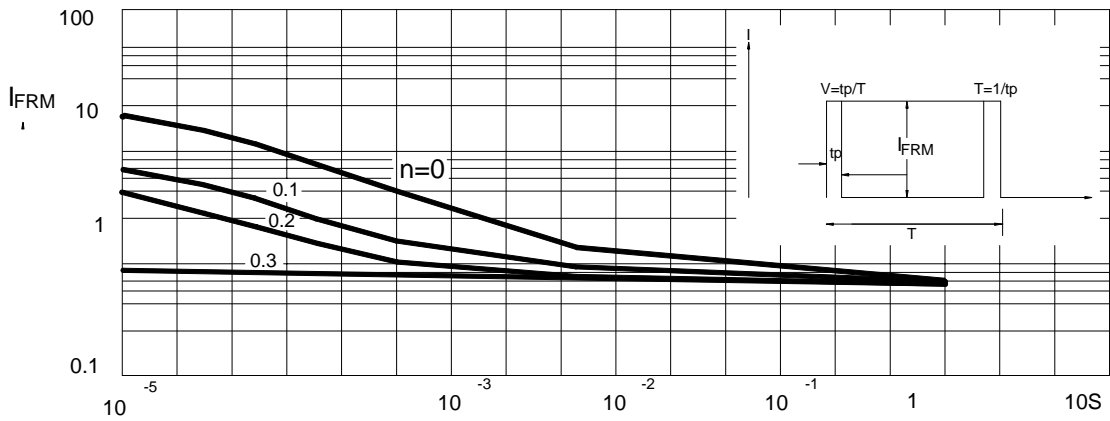
**LL4148 Typical Characteristics**



**AMBIENT TEMPERATURE**



**FIG.2- FORWARD CHARACTERISTICS**



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