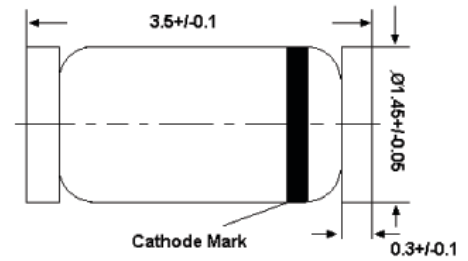


SCHOTTKY BARRIER DIODE

Ultra High-Speed Switching, Voltage Clamping Protection Circuits and Blocking Applications

Features

- Low forward voltage.
- Guard ring protected.
- Hermetically-sealed leaded glass package.
- High breakdown voltage.

LL34


Glass case MinimELF
Dimensions in mm

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

Parameter	Symbol	Limits	Unit
Continuous reverse voltage	V_R	50	V
Continuous forward current	I_F	200	mA
Average forward current	$I_{F(AV)}$	200	mA
Repetitive peak forward current $t_p \leq 1\text{sec.}; \delta \leq 0.5$	I_{FRM}	500	mA
Non-repetitive peak forward current $t_p = 10\text{ms}$	I_{FSM}	5	A
Operating ambient temperature	T_{amb}	-65 to +125	$^\circ\text{C}$
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_S	-65 to +150	$^\circ\text{C}$
Thermal resistance from junction to ambient	R_{thj-a}	320	K/W

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
Forward voltage					
at $I_F = 0.1\text{mA}$	V_F	-	-	300	mV
at $I_F = 1\text{mA}$	V_F	-	-	380	mV
at $I_F = 10\text{mA}$	V_F	-	-	450	mV
at $I_F = 30\text{mA}$	V_F	-	-	600	mV
at $I_F = 100\text{mA}$	V_F	-	-	900	mV
Reverse current (Note 1)					
at $V_R = 40\text{V}$	I_R	-	-	5	μA
Reverse recovery time					
at $I_F = 10\text{mA}, I_R = 10\text{mA}, R_L = 100\Omega$	t_{rr}	-	-	4	ns
Diode capacitance					
at $V_R = 1\text{V}, f = 1\text{MHz}$	C_d	-	-	8	pF

Note 1: Pulsed test: $t_p = 300\mu\text{s}; \delta = 0.02$.

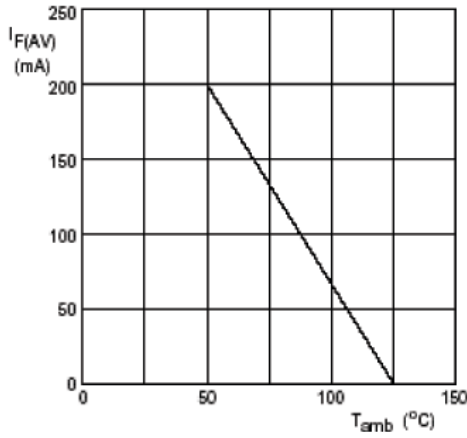
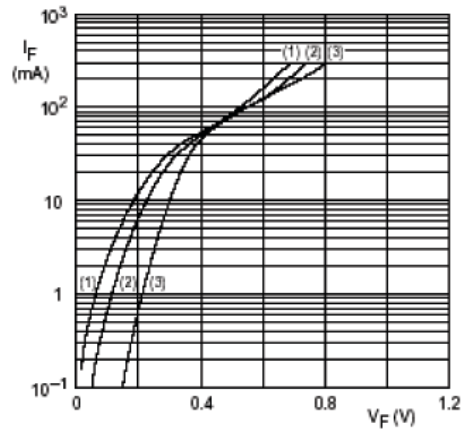
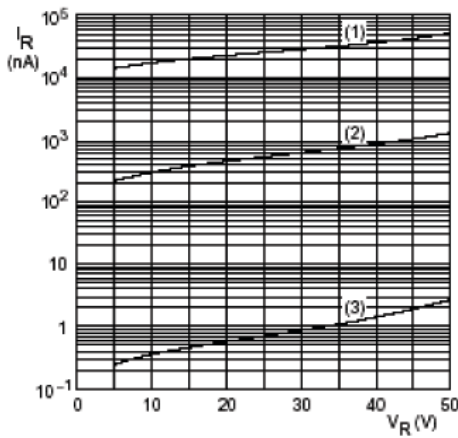


Fig. 1 Derating curve.



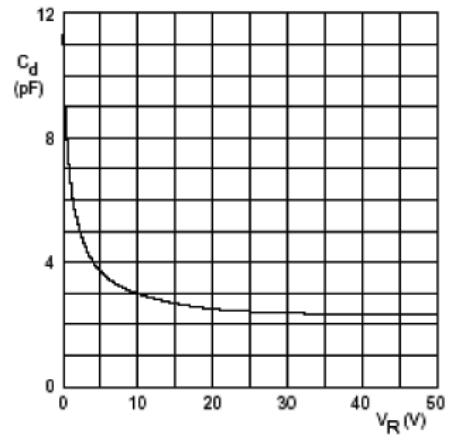
- (1) $T_{amb} = 125^{\circ}\text{C}$.
- (2) $T_{amb} = 85^{\circ}\text{C}$.
- (3) $T_{amb} = 25^{\circ}\text{C}$.

Fig. 2 Forward current as a function of forward voltage; typical values.



- (1) $T_{amb} = 85^{\circ}\text{C}$.
- (2) $T_{amb} = 25^{\circ}\text{C}$.
- (3) $T_{amb} = -40^{\circ}\text{C}$.

Fig. 3 Reverse current as a function of reverse voltage; typical values.



$f = 1 \text{ MHz}$.

Fig. 4 Diode capacitance as a function of reverse voltage; typical values.

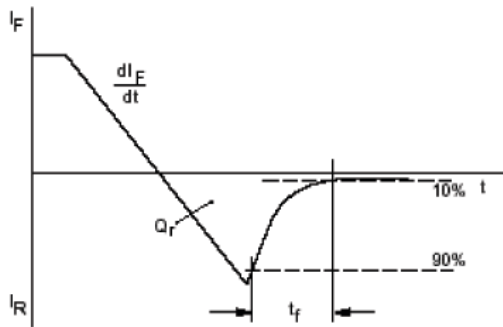


Fig. 5 Reverse recovery definitions.