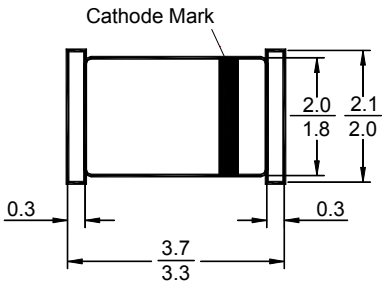
LM5817 THRU LM5819

SURFACE MOUNT SCHOTTKY BARRIER DIODES

Features

- Low switching losses
- Fast recovery time
- Guard ring protected
- Hermetically sealed glass SMD package.



Plastic case MiniMELF
Dimensions in mm

APPLICATIONS

- Low power, swiched-mode power supplies
- Rectifying
- Polarity protection

Absolute Maximum Ratings and Characteristics (Ratings at T_{amb} = 25 °C unless otherwise specified.)

Parameter	Symbols	LM5817	LM5818	LM5819	Units
Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	V
Non-repetitive Peak Reverse Voltage	V_{RSM}	24	36	48	V
Continuous Reverse Voltage	V_R	20	30	40	V
Crest Working Reverse Voltage	V_{RWM}	20	30	40	V
Average Forward Current (T_{amb} = 60 °C)	$I_{(AV)}$	1			A
Non-repetitive Peak Forward Current t = 10 ms half sine wave; $T_j = T_{jmax}$ prior to surge: V_R = 0	I_{FSM}	25			A
Forward Voltage at I_F = 0.1 A at I_F = 1 A at I_F = 3 A	V_F	0.32 0.45 0.75	0.33 0.55 0.875	0.34 0.6 0.9	V
Reverse Current at $V_R = V_{RRMmax}$ [1] at $V_R = V_{RRMmax}$ T_j = 100 °C	I_R	1 10			mA
Thermal Resistance	$R_{\theta JA}$ $R_{\theta JL}$	150 60			K/W
Typical Diode Capacitance at V_R = 4 V, f = 1 MHz	C_D	70	50	50	pF
Junction Temperature	T_J	125			°C
Storage Temperature Range	T_S	-65 to +175			°C

[1] Pulse test: tp = 300 µs; δ = 0.02

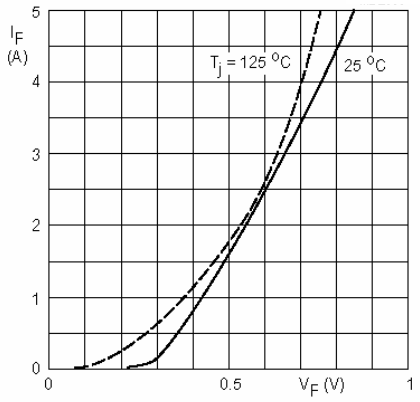


Fig.2 Typical forward voltage.

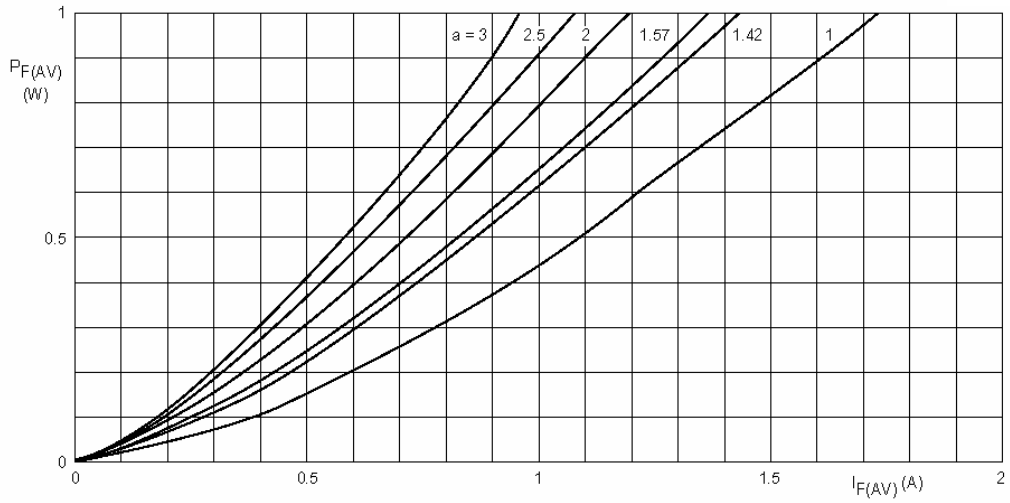


Fig.3 LM5817 Maximum values steady state forward power dissipation as a function of the average forward current; a = $I_{F(RMS)}/I_{F(AV)}$.

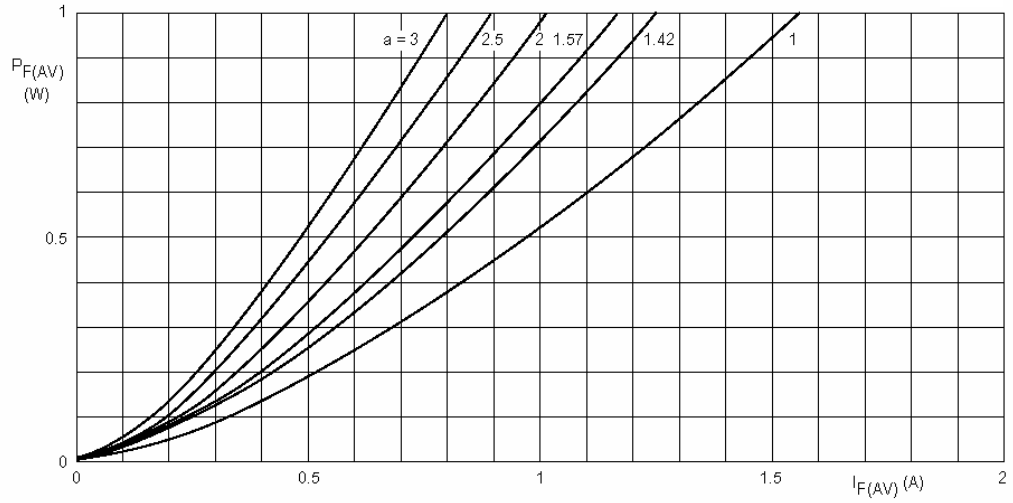


Fig.4 LM5818 Maximum values steady state forward power dissipation as a function of the average forward current; a = $I_{F(RMS)}/I_{F(AV)}$.

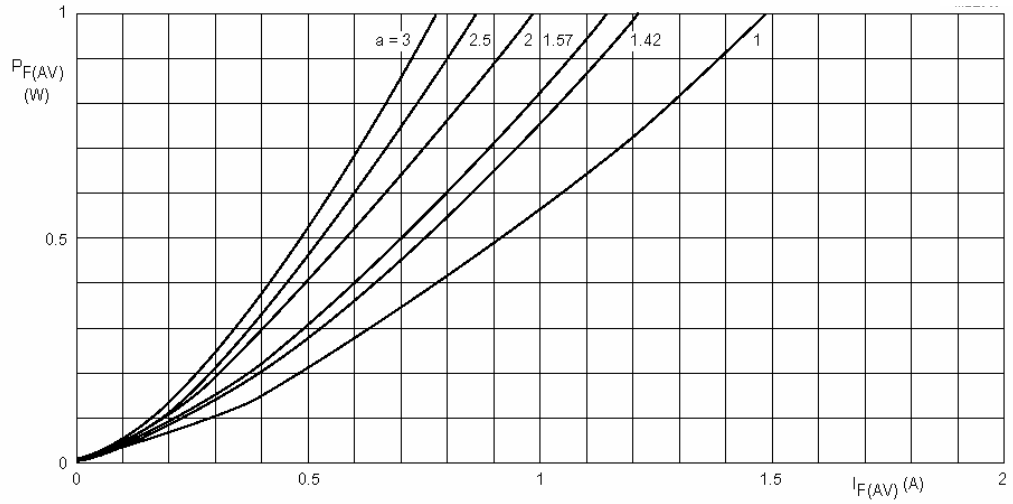


Fig.5 LM5819 Maximum values steady state forward power dissipation as a function of the average forward current; a = $I_{F(RMS)}/I_{F(AV)}$.

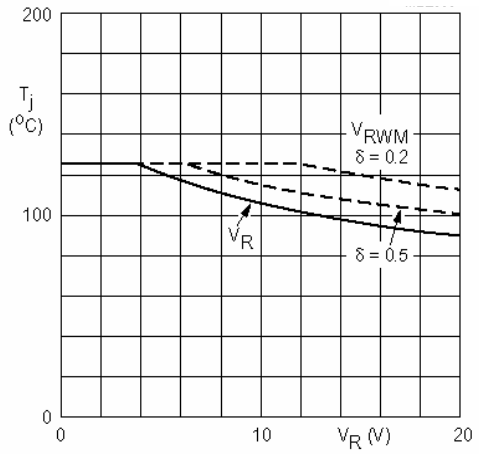


Fig.6 LM5817 Maximum permissible junction temperature as a function of reverse voltage; device mounted; refer to SOD87 standard mounting conditions.

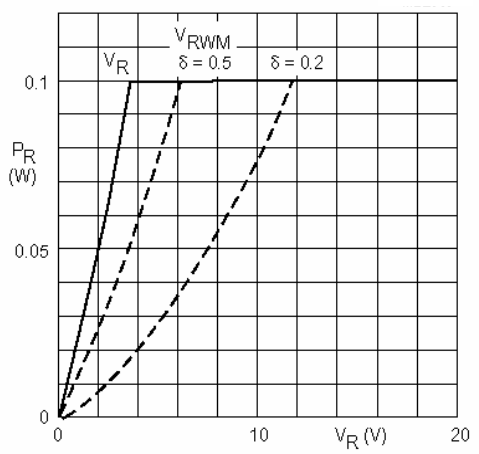


Fig.7 LM5817 Reverse power dissipation as a function of reverse voltage (max. values); device mounted; refer to SOD87 standard mounting conditions.

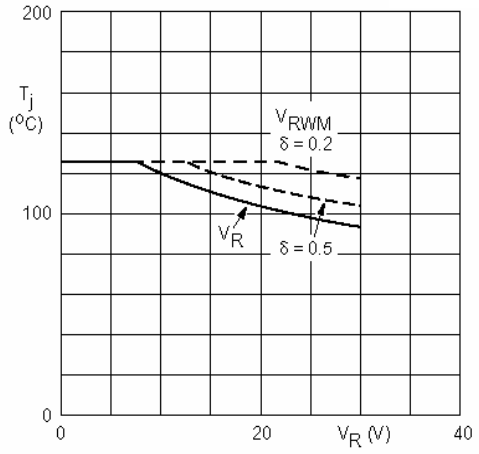


Fig.8 LM5818 Maximum permissible junction temperature as a function of reverse voltage; device mounted; refer to SOD87 standard mounting conditions.

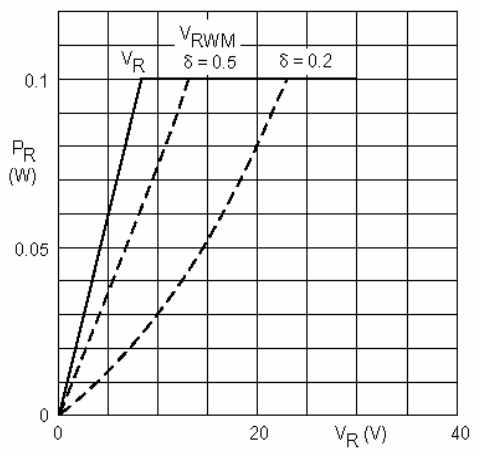


Fig.9 LM5818 . Reverse power dissipation as a function of reverse voltage (max. values); device mounted; refer to SOD87 standard mounting conditions.

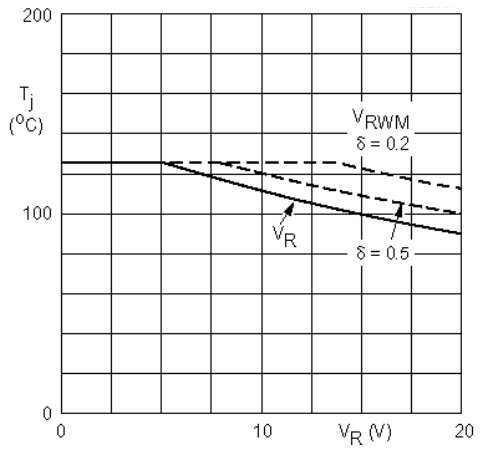


Fig.10 LM5819 Maximum permissible junction temperature as a function of reverse voltage; device mounted; refer to SOD87 standard mounting conditions.

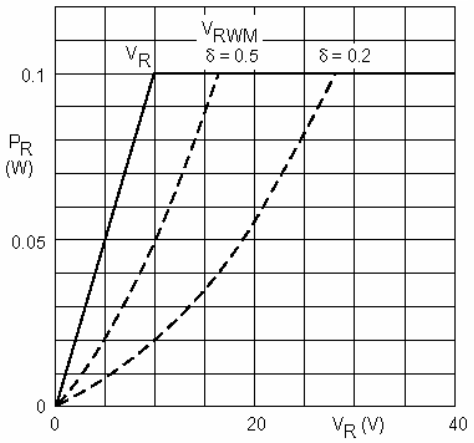


Fig.11 LM5819 Reverse power dissipation as a function of reverse voltage (max. values); device mounted; refer to SOD87 standard mounting conditions.