

LM5817 THRU LM5819

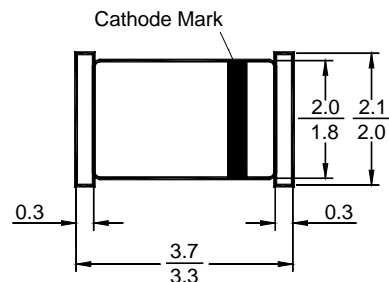
SURFACE MOUNT SCHOTTKY BARRIER DIODES

Features

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

APPLICATIONS

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

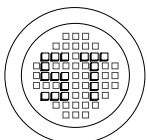


Plastic case MiniMELF
Dimensions in mm

Absolute Maximum Ratings and Characteristics (Ratings at $T_{amb} = 25\text{ }^{\circ}\text{C}$ 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 ($T_{amb} = 60\text{ }^{\circ}\text{C}$)	$I_{(AV)}$	1			A	
Non-repetitive Peak Forward Current $t = 10\text{ ms}$ half sine wave; $T_j = T_{jmax}$ prior to surge; $V_R = 0$	I_{FSM}	25			A	
Forward Voltage	V_F	at $I_F = 0.1\text{ A}$	0.32	0.33	0.34	V
		at $I_F = 1\text{ A}$	0.45	0.55	0.6	
		at $I_F = 3\text{ A}$	0.75	0.875	0.9	
Reverse Current	I_R	at $V_R = V_{RRMmax}$ ¹⁾	1			mA
		at $V_R = V_{RRMmax}$ $T_j = 100\text{ }^{\circ}\text{C}$	10			
Thermal Resistance	$R_{\theta JA}$ $R_{\theta JL}$	150 60			K/W	
Typical Diode Capacitance at $V_R = 4\text{ V}$, $f = 1\text{ MHz}$	C_D	70	50	50	pF	
Junction Temperature	T_J	125			$^{\circ}\text{C}$	
Storage Temperature Range	T_S	-65 to +175			$^{\circ}\text{C}$	

¹⁾ Pulse test: $t_p = 300\text{ }\mu\text{s}$; $\delta = 0.02$



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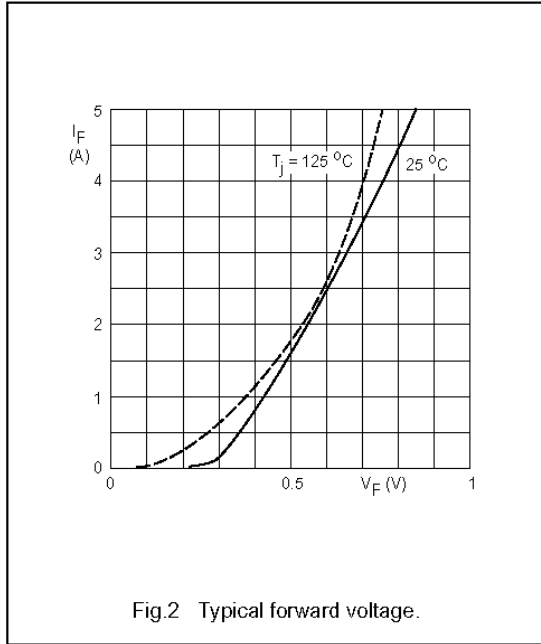


Fig.2 Typical forward voltage.

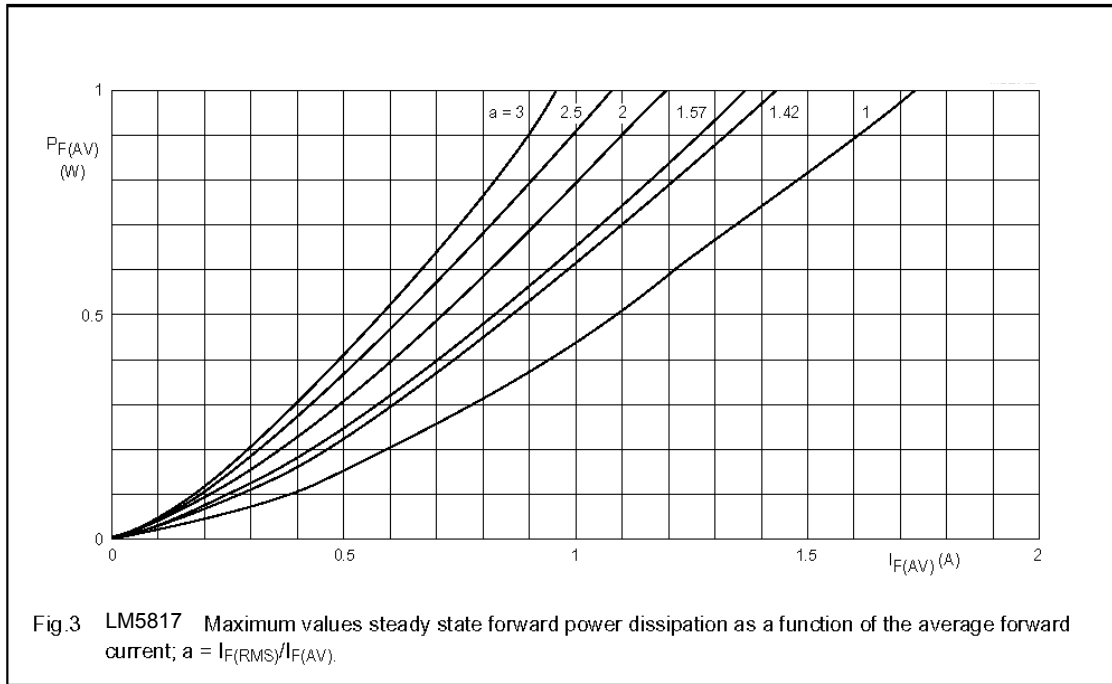
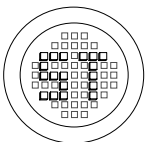


Fig.3 LM5817 Maximum values steady state forward power dissipation as a function of the average forward current; $a = I_{F(RMS)}/I_{F(AV)}$.



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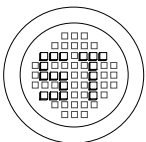
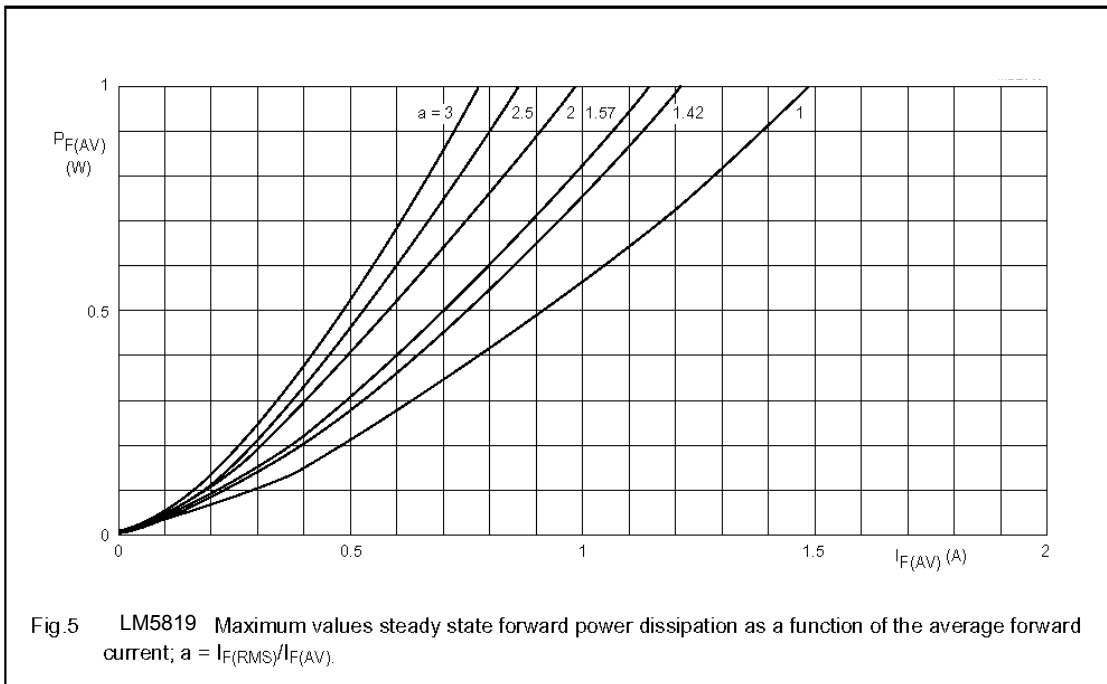
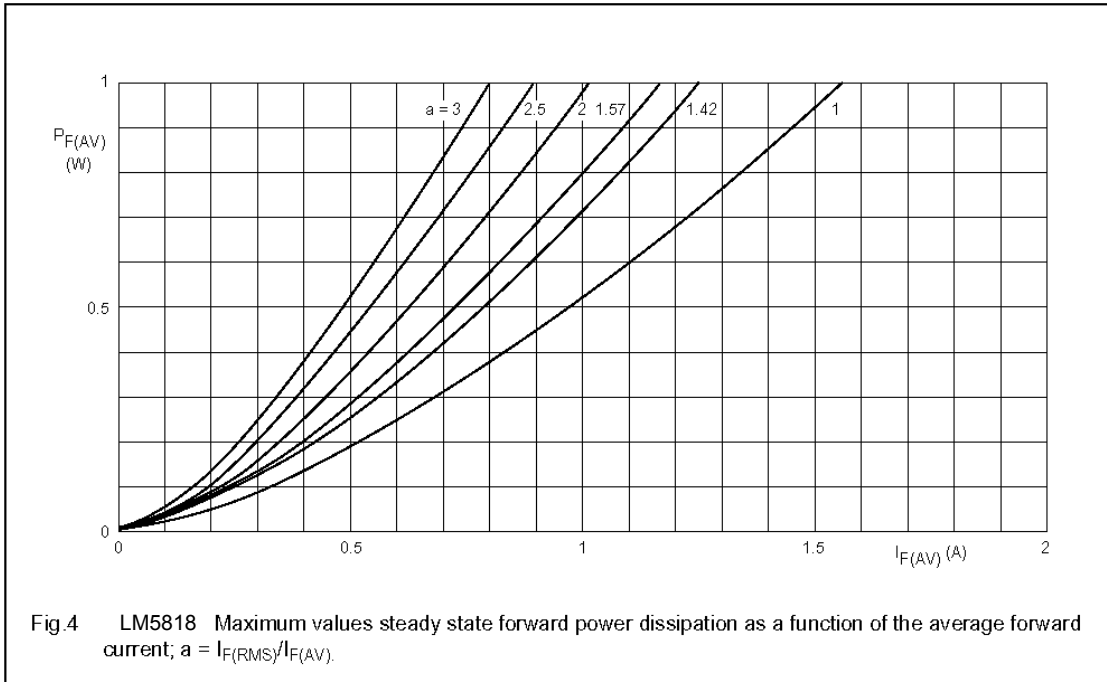
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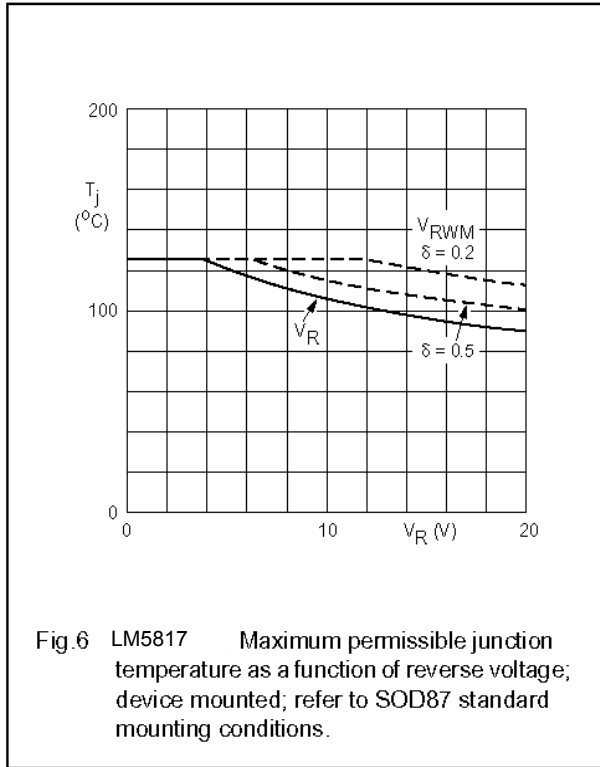


Fig. 6 LM5817 Maximum permissible junction temperature as a function of reverse voltage; device mounted; refer to SOD87 standard mounting conditions.

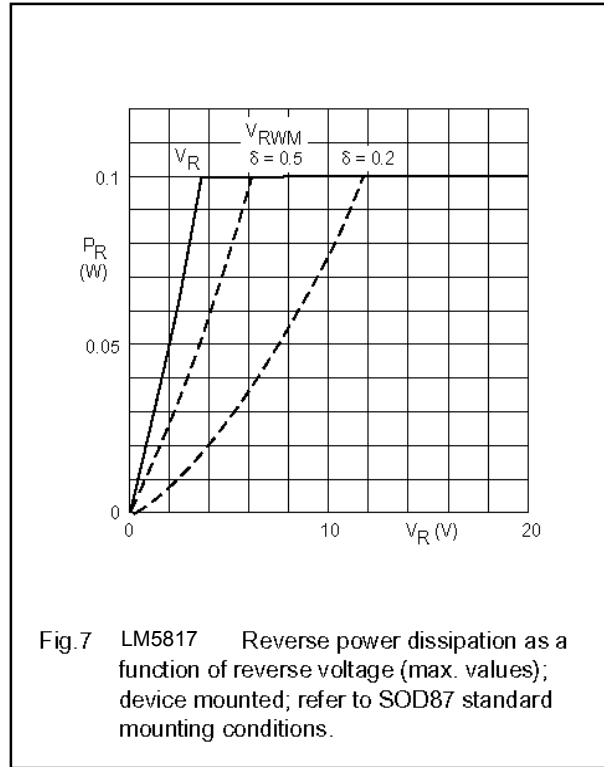


Fig. 7 LM5817 Reverse power dissipation as a function of reverse voltage (max. values); device mounted; refer to SOD87 standard mounting conditions.

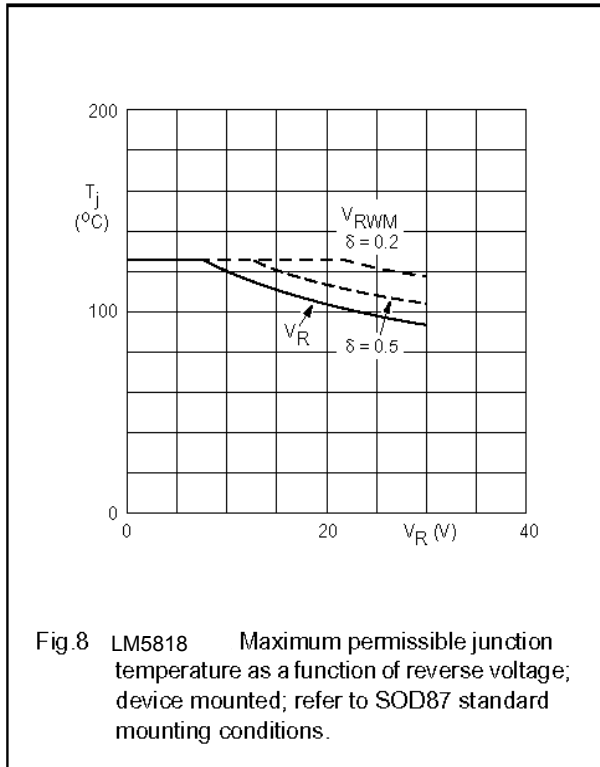


Fig. 8 LM5818 Maximum permissible junction temperature as a function of reverse voltage; device mounted; refer to SOD87 standard mounting conditions.

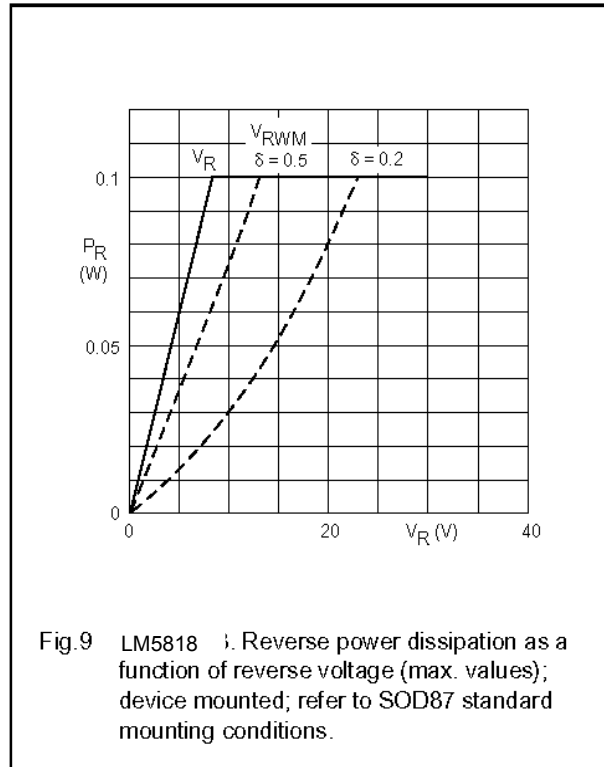
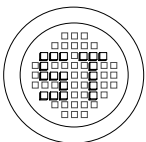


Fig. 9 LM5818 Reverse power dissipation as a function of reverse voltage (max. values); device mounted; refer to SOD87 standard mounting conditions.



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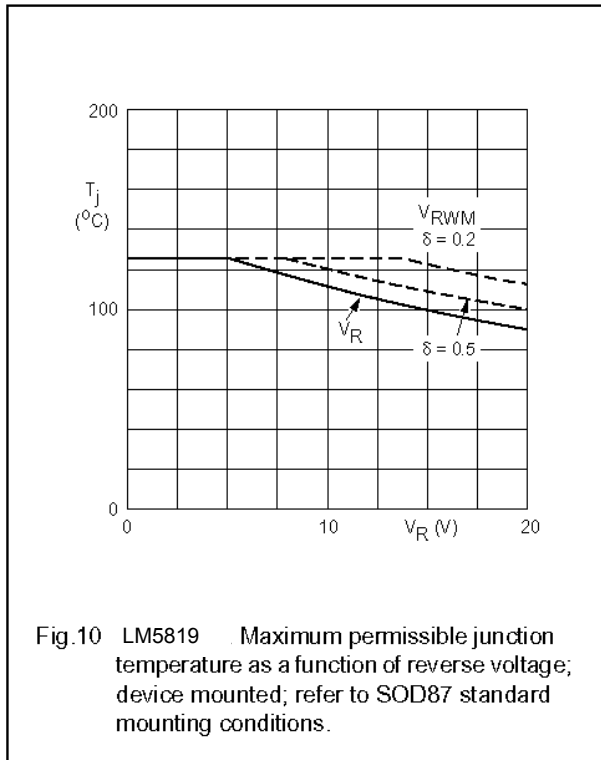


Fig.10 LM5819 Maximum permissible junction temperature as a function of reverse voltage; device mounted; refer to SOD87 standard mounting conditions.

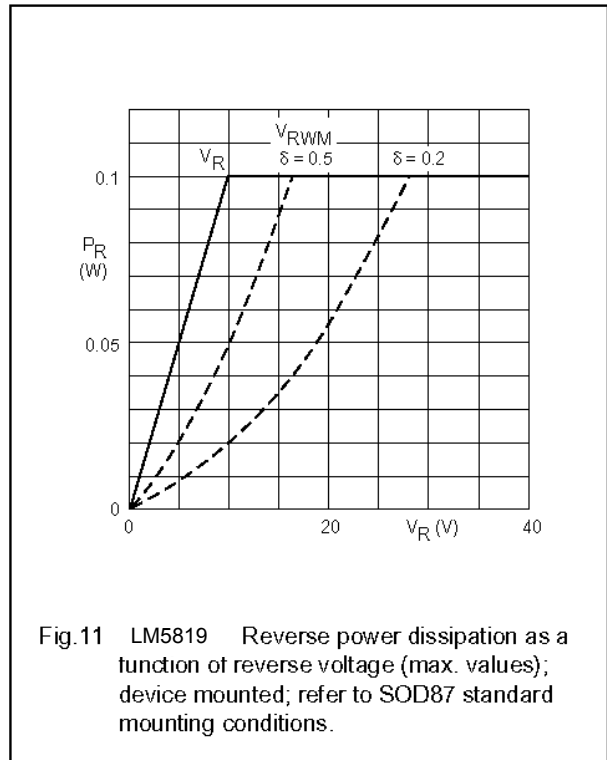
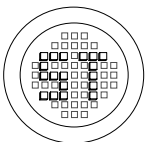


Fig.11 LM5819 Reverse power dissipation as a function of reverse voltage (max. values); device mounted; refer to SOD87 standard mounting conditions.



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