



Slim Ultra Low V_F TO-277 Schottky

Monday, 2 September, 2013

Sirect Semiconductor Inc., announced that the new ultra low V_F slim package, TO-277 Schottky, for the high-density and slim portable applications such as mobile phone, note book, pad, LED lighting and SMPS (switching-mode power supply), etc. There are both planer alloy and trench types for various requirements of high-efficiency and high-density. Please see the underneath table for your consideration and choice.

Break-down Volt.	Rectified Current	Planer Alloy Type	Trench Type
45V	10A	S10L45PB	S10U45MA
	15A	S15L45PB	S15U45MA
50V	15A	NA	S15U50PB
60V	10A	S10L60PB	NA
	15A	S15L60PB	NA
100V	10A	S10L100PB	NA
	15A	S15L100PB	NA
150V	10A	S10L150PB	NA
	15A	S15L150PB	NA
200V	10A	S10L200PB	NA

Table 1: Slim TO-277 Schottky series

Sirect's slim TO-277 Schottkys not only hold the competitive cost, but also based on the good performance of electronic characteristics for high-efficiency application. We compared S15U50PB of Sirect with SBR15U50SP5 of D Company and found the V_F and I_R result as below:

Part. No.	Average Electronic parameters		
	V_F @3A (mV)	V_B @ 0.5mA (V)	I_R @ 50V (μ A)
S15U50PB (Sirect)	332.57	59.016	91.680
SBR15U50SP5 (D Company)	338.71	62.254	159.63

Table 2: Comparison with D Company

The typical thermal resistance ($R_{\theta JA}$) of slim TO-277 Schottky is 35°C/W which mounted on P.C.B board with copper pad size 10mm x 10mm, thickness 0.2mm. The following formula is the relation of temperature of package case and junction :

$$T_c = T_J - [R_{\theta JC} \times P_D]$$

T_c (C°) = Temperature of Case

T_J (C°) = Temperature of Semiconductor Junction

P_D (W) = Power Disipated in Semiconductor

$R_{\theta JC}$ (°C/W) = Thermal Resistance (Junction to Case)

The Slim TO-277 package is a high density and very slim package. The TO-277 package cross section and drawing is as below:

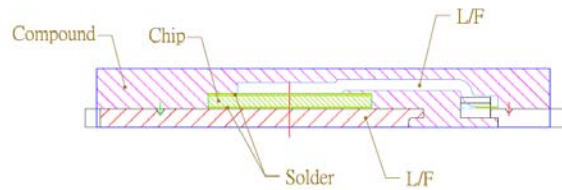


Fig.1: Cross Sectional View

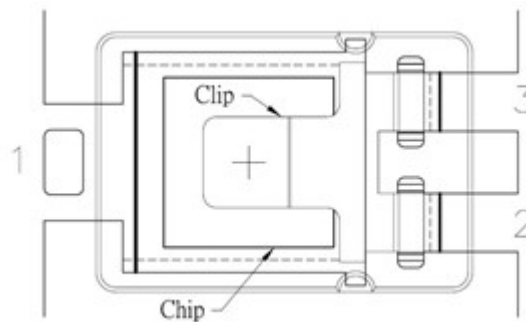


Fig.2: Bonding Drawing



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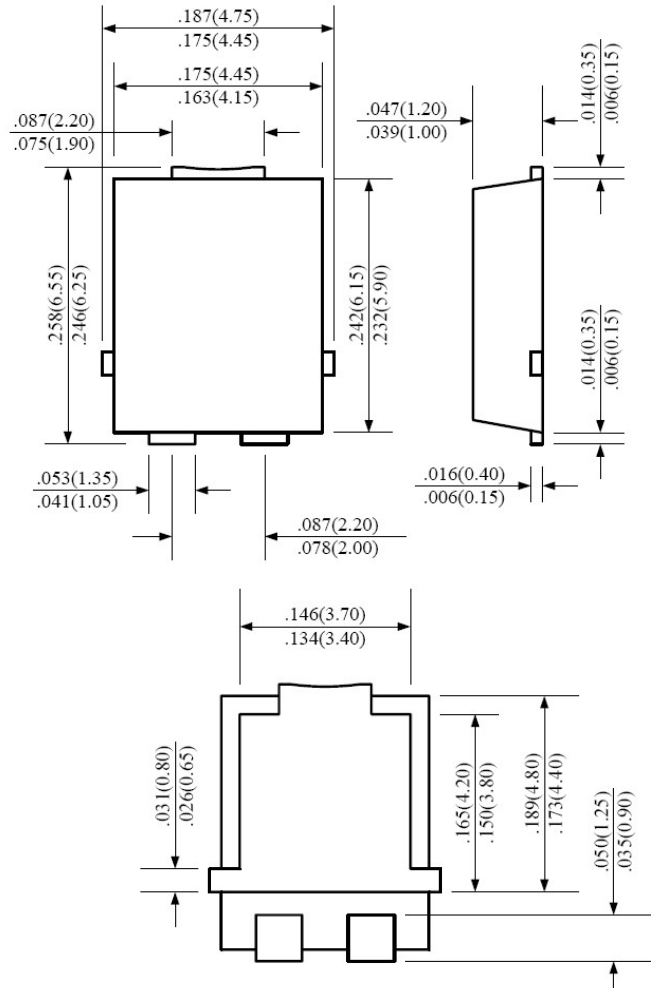
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There are two types of slim TO-277 package since the different height (1.0mm and 1.2mm) for all kinds of the design of application. The followings are the outline drawing of slim TO-277 package.



Unit: inch (mm)

Fig.3: Dimensions

For further details and tech support, please contact Sirect and our distributors at the location nearest you.



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