

Mounting the RD100HHF1

The heat spreader thickness affects the distance from the bottom of the RD100HHF1 mounting flange and the spacers required to support the board on the 4 mounting corners. It is necessary to keep the top of the mounting flange of the RD100HHF1 at the same level as the top of the PCB so that the thin 0.1mm Gate and Drain leads in addition to the two copper straps used to attach the Source flange are not unduly stressed during installation. From a pure mathematical analysis, without tolerance considerations, a spacer of 0.114" would be required to keep the PCB aligned with the bottom of the contacts of T3 & T4 when using a ¼" Heat Spreader.

Due to an unfortunate miscommunication the Spreader hardware was set up using a 3/16" Spreader but the actual Spreader is ¼" thick.

The table below and the drawing on page 2 show the mechanical stack up of the various parts and the distances for various thicknesses of the Copper Spreader. The best case when using a ¼" spacer does not require any extra hardware. The closest available thickness available was 3/16" [0.1875"] thick and likely could have used a piece of #18 ga wire for the spacer. The ¼" Spreader requires a distance of 0.011" less than a 3/8" [0.375"] spacer or 0.114". Currently the best solution may be to try and find an appropriate 3/8" spacer and remove 0.10" to 0.12" with a file.

	Drawing on pg2 Converted to		Best Case Converted to		3/16" Spreader Converted to		¼" Spreader Converted to	
	Metric (mm)	English (in)	Metric (mm)	English (in)	Metric (mm)	English (in)	Metric (mm)	English (in)
Top of RD100HHF1	1.60	0.063	1.60	0.063	1.60	0.063	1.60	0.063
Top of contact	0.10	0.004	0.10	0.004	0.10	0.004	0.10	0.004
Top of Board - REF	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000
Bottom of PCB	-1.60	-0.063	-1.60	-0.063	-1.60	-0.063	-1.60	-0.063
Bottom of RD100HHF Flange and top of Heat Spreader	-4.50	-0.177	-4.50	-0.177	-4.50	-0.177	-4.50	-0.177
Top of Heatsink	-8.26	-0.325	-7.96	-0.313	-9.26	-0.365	-10.85	-0.427
Thickness of Heat spreader	3.76	0.148	3.46	0.136	4.76	0.188	6.350	0.250
Thickness of spacer from Heatsink to bottom of PCB	-6.66	-0.262	-6.36	-0.250	-7.66	-0.302	-9.25	-0.364
Shim for a 0.250" spacer		0.012		0.000		0.052	2.898	0.114

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