



Works Instruction for SOL8SDR-C

WI0267 v7

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Change History

Version	Change Summary + QUAL/ECN ref	Author	ME / Prod Approval	Eng Approval	Date
v1	Initial Release (converted from supplier documentation)	NP	N/A	N/A	04/02/2016
v2	QUAL-8852/ECN-3516	RGH	IV	RL	21/06/2016
v3	ECN-3873	NP	IV	JH	28/11/2016
V4	Added UHF variant. Removed SOL8NET	NP	IV	JH	20/02/2017
V5	Changed D1800 reference to SA4130, changed SD card section.	NP	IV	RL	25/07/2017
V6	<ul style="list-style-type: none"> - Add reference to environmental testing - Add SA4060 on variants table - Add new metalwork - Add new coin cell 	MJE	IV	JH	22/06/2018
V7	Change 1.5mm gap pad to 1.0mm	MJE	AS	CT	12/07/2018

Related Documents

Index	File	Title
[1]	http://tcs-dcms/Ops/Documents/Torque%20Standards.pptx	6,240,003 Torque Standards
[2]		

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1 Scope

This work instruction outlines the process to be followed to assemble: SOL8SDR-C-XXXXXX variants and SOL8NET-C.

2 Variants Table

SA Number	Description	PCB
SA3578	SOL8SDR-C Transceiver (OEM) 1.78~2.3GHz, Telemetry 902-928MHz Top Level Assembly	D1816_0915
SA3652	SOL8SDR-C Transceiver (OEM) 1.14~1.50GHz, Telemetry 433.05-434.79MHz Top Level Assembly	D1815_0433
SA3763	SOL8SDR-C Transceiver (OEM) 1.67~2.35GHz, Telemetry 433.05-434.79MHz Top Level Assembly	D1816_0433
SA3768	SOL8SDR-C Transceiver (OEM) 4.40~5.00GHz, Telemetry 902-928MHz Top Level Assembly	D1823_0915
SA3811	SOL8SDR-C Transceiver (OEM) 1.98~2.7GHz, Telemetry 433.05-434.79MHz Top Level Assembly	D1817_0433
SA3813	SOL8SDR-C Transceiver (OEM) 1.98~2.7GHz, Telemetry 902-928MHz Top Level Assembly	D1817_0915
SA3815	SOL8SDR-C Transceiver (OEM) 4.40~5.00GHz, Telemetry 433.05-434.79MHz Top Level Assembly	D1823_0433
SA3967	SOL8SDR-C Transceiver (OEM) 320~470MHz, Telemetry 902-928MHz Top Level Assembly	D1812_0915
SA4060	SOL8SDR-C Transceiver (OEM) 5.50~6.00GHz, Telemetry 902-928M	D1825_0915

3 Works Instructions

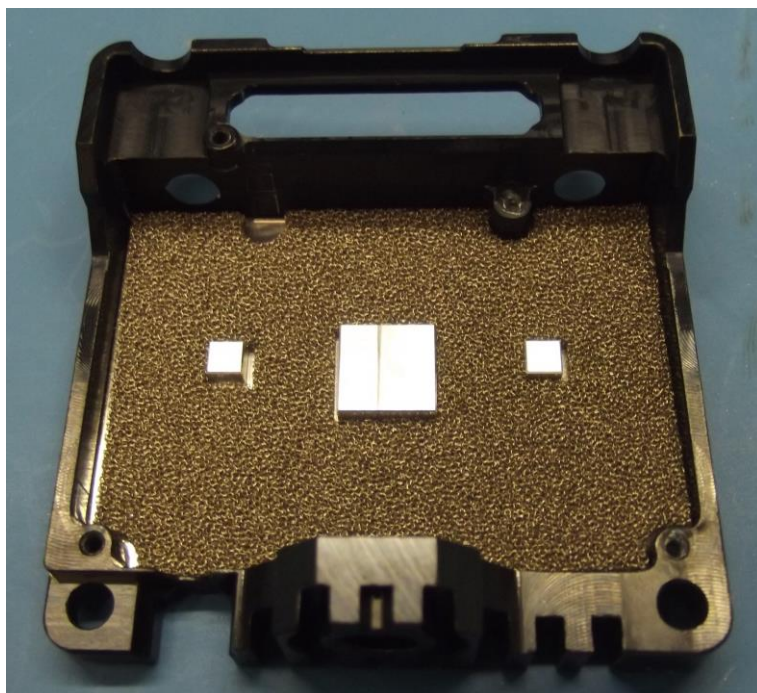
3.1 Assembly

1) For **SA3967**:

- a. Fit gasket foam (**MW2862**) to the housing lid (**MW3406**).



2) For all remaining SAs. Fit gasket foam (**MW3764**) to the housing lid (**MW3763**).

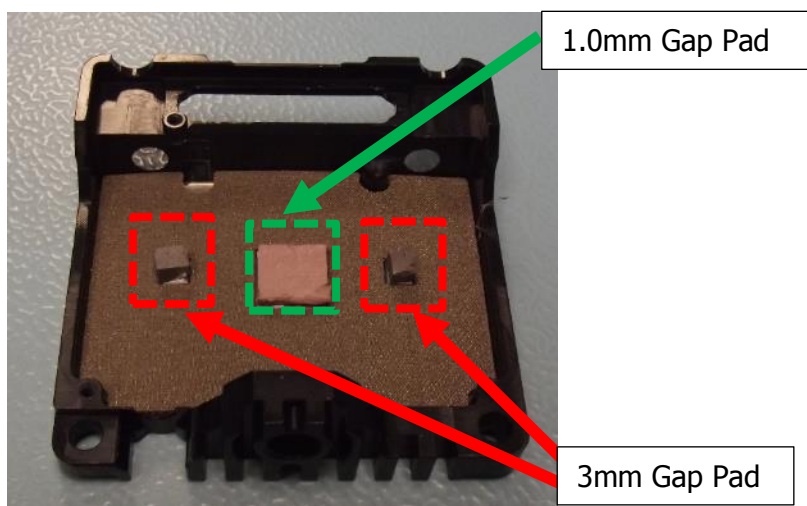


3) For the following SAs fit both 1.0mm and 3mm gap pad:

- SA3578
- SA3652
- SA3763
- SA3811
- SA3813

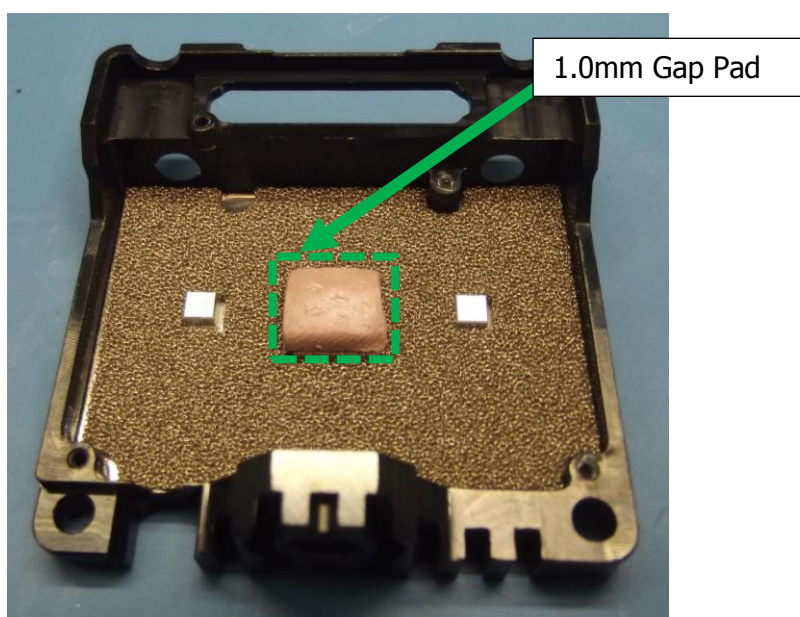
Obtain and cut 2 x (3mm x 3mm) 3mm gap pad (AP007557). Place on the left and right hand side pillar.

Obtain and cut (8mm x 8mm) 1.0mm gap pad (AP008986). Place on the centre pillar

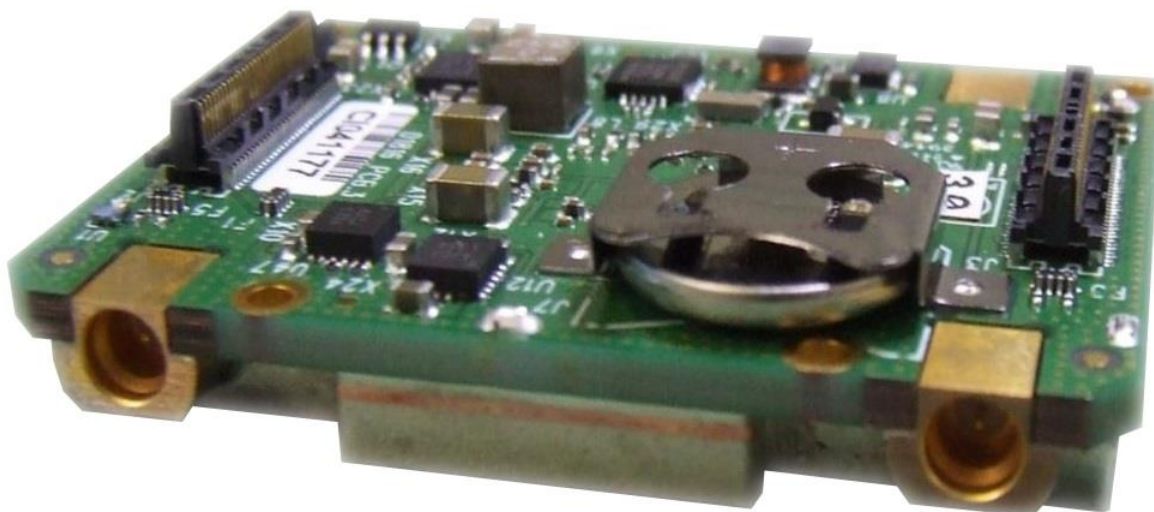


4) For the following SAs fit 1.0mm **ONLY**

- SA3768
- SA3815
- SA4060

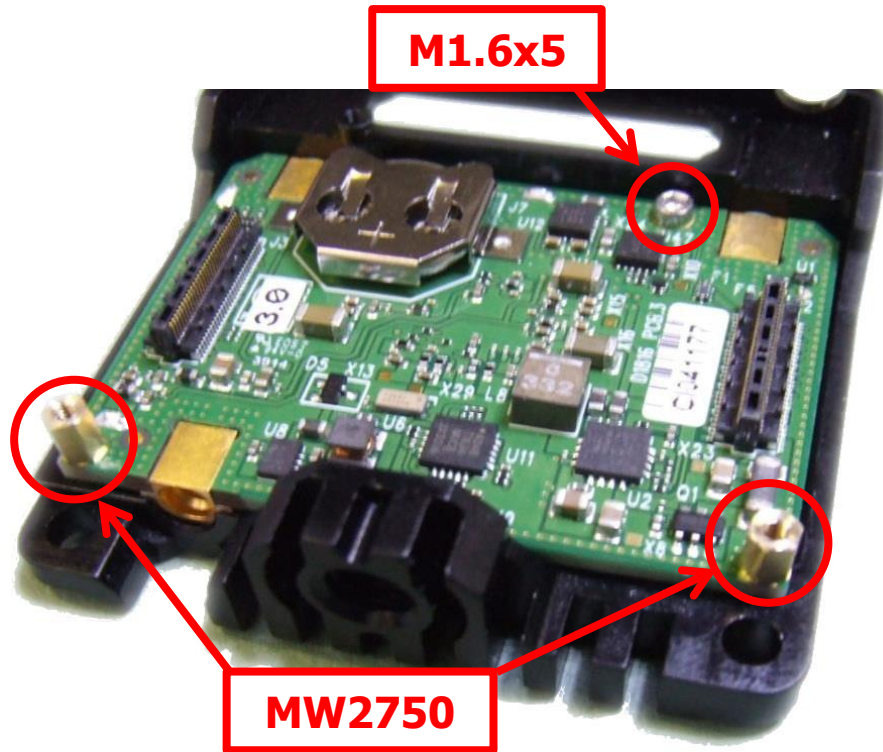


- 5) Measure the voltage of the coin cell battery (**AP009568**), it should read $\geq 3.10\text{v}$, if not use correct disposal method and replace. Take D18xx RF PCBA (dependant on variant) or D1809 Non-RF PCBA and fit battery (**AP009568**) into battery holder. Finish operation by affixing a small amount of Kapton tape to the top of the battery holder, ensuring the entire face of the battery holder is covered.

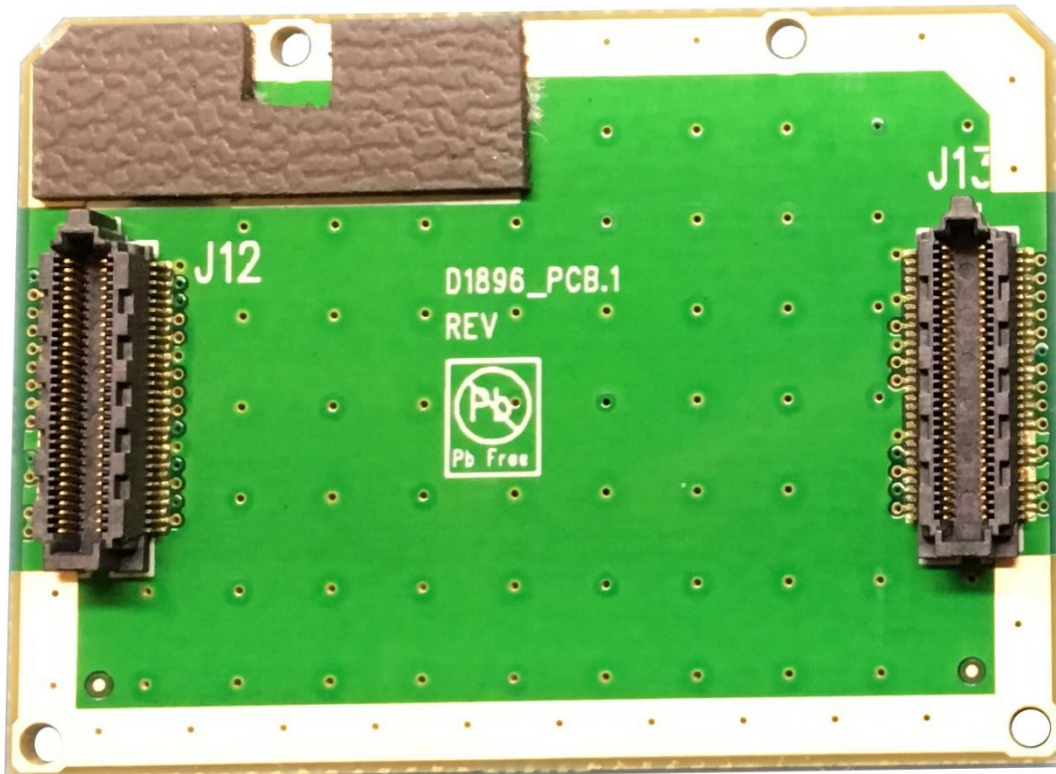




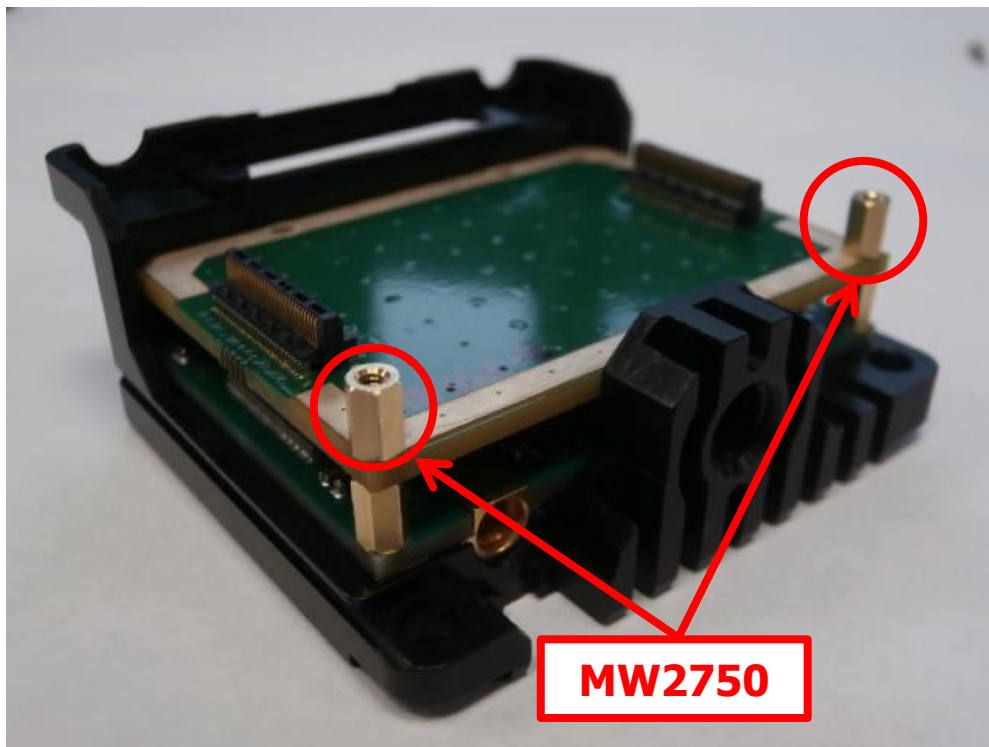
- 6) Offer the **D18xx** PCBA into the housing lid using x1pc M1.6x5 Cap Head Screw (**AP009099**) and x2pcs Tx Spacers (**MW2750**). Torque screw to 15cNM and spacers to 13cNM.



- 7) **UHF ONLY:** Take the Isolation PCB (**D1896**) and fit the D1812 RF Absorber (**MW3432**) as shown.



8) **UHF ONLY:** Now fit to the RF card. Secure in place using x2pcs Tx Spacers (**MW2750**).



9) Take **SA4130** PCBA (D1800), ensure the SD Card is already fitted and the board is tested



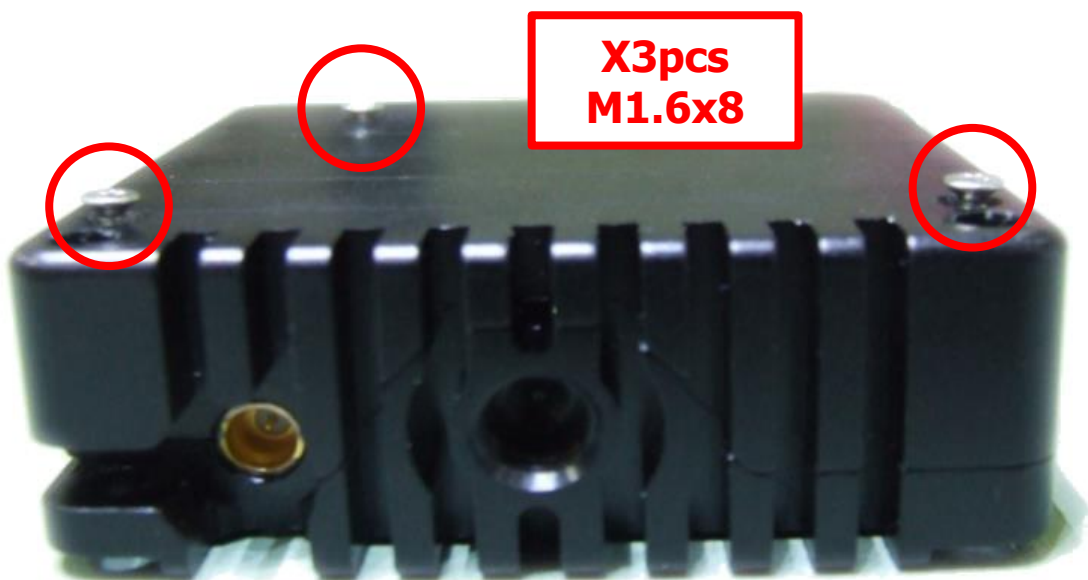
10) Connect the SA4130 to the D18xx or D1896 PCBA. Carefully align to the pillars and pressure evenly.



11) Apply thermal paste (**AP007525**) to U1, U2 and U5.



12) Offer the housing base ([MW2824](#), [MW3405](#)) to the assembly and fasten together using x3pcs M1.6x8mm TX5 CSK Screws ([AP008002](#)). Torque to 15cNM.



3.2 Labelling

1) Apply serial number label (**AP000270**) to the side of the unit (grooved) as shown:-



2) Apply the correct type product label centrally to the side of the unit (non-grooved) as shown:-



Please note that this label is an old branding. It will now read DTC

3) Affix 'Caution Replace Label with Heatsink' label (**AP008529**) in position as shown:-



4 Environmental Cycle

After assembly past to environmental test.

The cycle should be as follows:

1. Start at +20°C
2. Ramp down to -20°C (-10°C/min)
3. Dwell at -20°C for 1 hour
4. Ramp up to +60°C (+10°C/min)
5. Dwell at +60°C for 1 hour
6. Ramp down to -20°C (-10°C/min)
7. Repeat steps 3-6 two more times
8. Dwell at -20°C for 1 hour
9. Ramp up to +60°C within 20 mins (+10°C/min)
10. Dwell at +60°C for 1 hour
11. Ramp down to +20°C within 10 mins (-10°C/min)

End of test

4 cycles required