

ITEM #	QTY.	PART #	DESCRIPTION
1	4	SEE NOTES #5&6	WASHER, BRASS, M6
2	1	SEE NOTE #6	BOLT, BRASS, M6
3	1	SEE NOTE #6	STANDOFF, BRASS, M6
4	6	SEE NOTE #4	SCREW, M3
5	6	SEE NOTE #4	WASHER, M3
6	1	SEE NOTE #1	PCB ASSEMBLY
7	1	1201435	SIL PAD
8	1	1201433	HEATSINK
9	1	SEE NOTE #5	BOLT, BRASS, M5
10	1	SEE NOTE #5	STANDOFF, BRASS,, M5


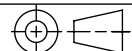
- NOTES:
- PCB ASSEMBLY TO BE BUILT USING QPL BILL OF MATERIAL: BOM1200743rvH.
 - WORKMANSHIP STANDARD PER: IPC-J-STD-001E, IPC-A-610E. SOLDERING AND ELECTRICAL CONNECTIONS : IPC-S-815B. OR MORE CURRENT VERSIONS OF THESE STANDARDS.
 - APPLY LABEL OR LABELS WITH THE FOLLOWING INFORMATION:
 - TENNANT PART NUMBER AND REVISION. EXAMPLE: 1200743-02.
 - NOTE: THIS NUMBER AND REVISION SHOULD MATCH THE RELEASED TENNANT DRAWING.
 - MANUFACTURER'S LABEL WITH SERIAL NUMBER.
 - NOTE: PLACE LABEL(S) SO THEY DO NOT GET COVERED UP BY THE HEATSINK.
 - SCREWS AND WASHERS HOLDING THE HEATSINK (ITEM #8) AND SIL-PAD (ITEM #7):
 - (6) SCREW, PAN HEAD, PHILLIPS, M3 X 0.5, 8.0MM LONG, DIN 7985. McMaster CARR #92005A118 OR EQUIVALENT. (ITEM #4)
 - (6) WASHER, NYLON, FLAT, #6, 0.14B 0.31D .03. KEYSTONE #3349 OR EQUIVALENT, (ITEM #5).
 - TO BE APPLIED IN (6) LOCATIONS AS SHOWN.
 - SCREW HEAD TO BE ON THE TOP SIDE OF THE PCB AS SHOWN.
 - NYLON WASHERS (ITEM #5) TO BE LOCATED BETWEEN THE SCREW HEAD AND THE PCB(ITEM #6).
 - SCREWS (ITEM #4) TO BE TORQUED TO 0.50 Nm.
 - P1 (B+) POWER CONNECTION:
 - (1) BOLT, M5, 25MM LONG, HEX HEAD, BRASS, 0.8MM PITCH, FULLY THREADED(ITEM #9): McMaster CARR #93270A330 OR EQUIVALENT.
 - (2) WASHER, M6, BRASS, FLAT, 12MM O.D., 1.4-1.8MM THICK(ITEM #1): McMaster CARR #91635A240 OR EQUIVALENT.
 - (1) STAND-OFF, HEX, M5, BRASS, 1.0MM PITCH, 10MM TALL, 13MM WIDE (ITEM #10). RAF # M1457-5008B OR EQUIVALENT.
 - TO BE TORQUED TO 4.00 Nm.
 - ASSEMBLY SEQUENCE: BOLT HEAD AND SINGLE WASHER ON THE BOTTOM SIDE. FLAT WASHER, AND THEN STANDOFF ON THE TOP SIDE.
 - P2 (B-, GROUND) POWER CONNECTION:
 - (1) BOLT, M6, 25MM LONG, HEX HEAD, BRASS, 1.0MM PITCH, FULLY THREADED(ITEM #2): McMaster CARR #93270A440 OR EQUIVALENT.
 - (2) WASHER, M6, BRASS, FLAT, 12MM O.D., 1.4-1.8MM THICK(ITEM #1): McMaster CARR #91635A240 OR EQUIVALENT.
 - (1) STAND-OFF, HEX, M6, BRASS, 1.0MM PITCH, 10MM TALL, 13MM WIDE (ITEM #3). RAF # M1457-6010B OR EQUIVALENT.
 - TO BE TORQUED TO 5.88 Nm.
 - ASSEMBLY SEQUENCE: BOLT HEAD AND SINGLE WASHER ON THE BOTTOM SIDE. FLAT WASHER, AND THEN STANDOFF ON THE TOP SIDE.
 - EACH ASSEMBLY TO HAVE CONTINUITY TEST BETWEEN THE "P1" STUD(= B+) AND THE METAL HEATSINK. NO CONTINUITY = PASS. CONTINUITY = IMPROPERLY INSTALLED SIL-PAD.
 - CONFORMAL COATING APPLIED AS PER NOTES ON SHEET 2 OF 2.
 - EACH ASSEMBLY TO BE ICT TESTED AND FUNCTIONALLY TESTED. FUNCTIONAL TEST TBD.
 - ASSEMBLY TO BE MANUFACTURED PER RoHS/LEAD FREE STANDARDS.
 - AREA BENEATH THE HEATSINK (BACK SIDE) TO BE FREE OF SOLDER BUMPS. MASK OFF OR PROGRAM WAVE SOLDER SYSTEM TO PREVENT SOLDER BUILD UP IN THIS AREA.
 - DIMENSIONS FOR REFERENCE ONLY. REFER TO GERBER FILE.

REV-02 CHANGES:
1)CHANGE QPL BILL OF MATERIAL TO REV-H. RESISTOR AND SOFTWARE CHANGES TO FIX HORN OUTPUT.
2) ADD NOTE 12 REGARDING DIMENSIONS.
3) REMOVE PCB MANUFACTURING NOTES. REFER TO GERBER FILES FOR THIS INFORMATION.

ECO CONSULTATION



MATERIAL SPECIFICATIONS:	OTHER TREATMENTS AND FINISHES	PAINT - COLOR	CHANGED BY: JOHN HAEG	DATE: 12/16/2013
PART NAME: CIRCUITBOARD ASSY [SCRUB MODULE]	GLOSS	PERFORMANCE	MDR:	09/27/2012
		ACCEPTANCE	DES: JOHN HAEG	11/01/2011

REV	ECO
02	

WELDING NOTATION IN ACCORDANCE WITH AWS A2.4-98			GENERAL NOTES PRIMARY DIMENSIONS ARE METRIC, REFERENCE DIMENSIONS WITH BRACKETS ARE INCH. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE AFTER TREATMENTS AND FINISHES.		
UNLESS OTHERWISE SPECIFIED DIMENSION TOLERANCING IN ACCORDANCE WITH ASME Y14.5M-2009 ALL UNTOLERANCED DIMENSIONS ARE BASIC AND CONTROLLED BY:					
X.X ±0.8 ±[.03]		PROPRIETARY INFORMATION		DWG B SIZE	
X.XX ±0.25 ±[.010]		MAY NOT BE REPRODUCED OR DISCLOSED TO OTHERS WITHOUT WRITTEN PERMISSION OF TENNANT COMPANY.			
X.XXX ±0.125 ±[.0049]		SHEET 1 OF 2			
ANGLES ±0.5°				PART NUMBER 1200743	

CONFORMAL COATING AND RTV NOTES:
1) CONFORMAL COATING MATERIAL:
DYMAX CORP. #9-20557.
APPLIED COATING TO BE 91-112(MIC) THICK.
2) MASK OFF THE FOLLOWING AREAS ON THE TOP SIDE OF THE ASSEMBLY:
- CONNECTORS J1, J2, J3, J4, J5, J6,
- PADS FOR THE POWER AND GROUND STAND-OFFS P1 AND P2.
- THE 4 PCB ASSEMBLY MOUNTING HOLES IN THE CORNERS.
3) MASK OFF THE FOLLOWING AREAS ON THE BOTTOM SIDE OF THE ASSEMBLY:
- PADS FOR THE POWER AND GROUND STAND-OFFS P1 AND P2.
- THE COMPLETE AREA BELOW THE HEATSINK.
- THE 4 PCB ASSEMBLY MOUNTING HOLES IN THE CORNERS.
4) APPLY NON-CORROSIVE PCB SAFE RTV (LOCTITE 5145 OR EQUIVALENT) AROUND THE FOLLOWING COMPONENTS FOR VIBRATION PROTECTION: C66, C67, C72, C85 C51, X1, C48, L1. ALSO APPLY RTV BEADS BETWEEN CAPACITORS C66, C67, C72 AND C85 TO SECURE THEM TOGETHER.
5) MINIMUM RTV BEAD DIAMETER TO BE 3MM.

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										MATERIAL SPECIFICATIONS:										OTHER TREATMENTS AND FINISHES				PAINT - COLOR				CHANGED BY: JOHN HAEG				DATE: 12/16/2013	
MDR:				09/27/2012		X.XX ±0.25 ±[.010]																											
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																		ANGLES ±0.5°															