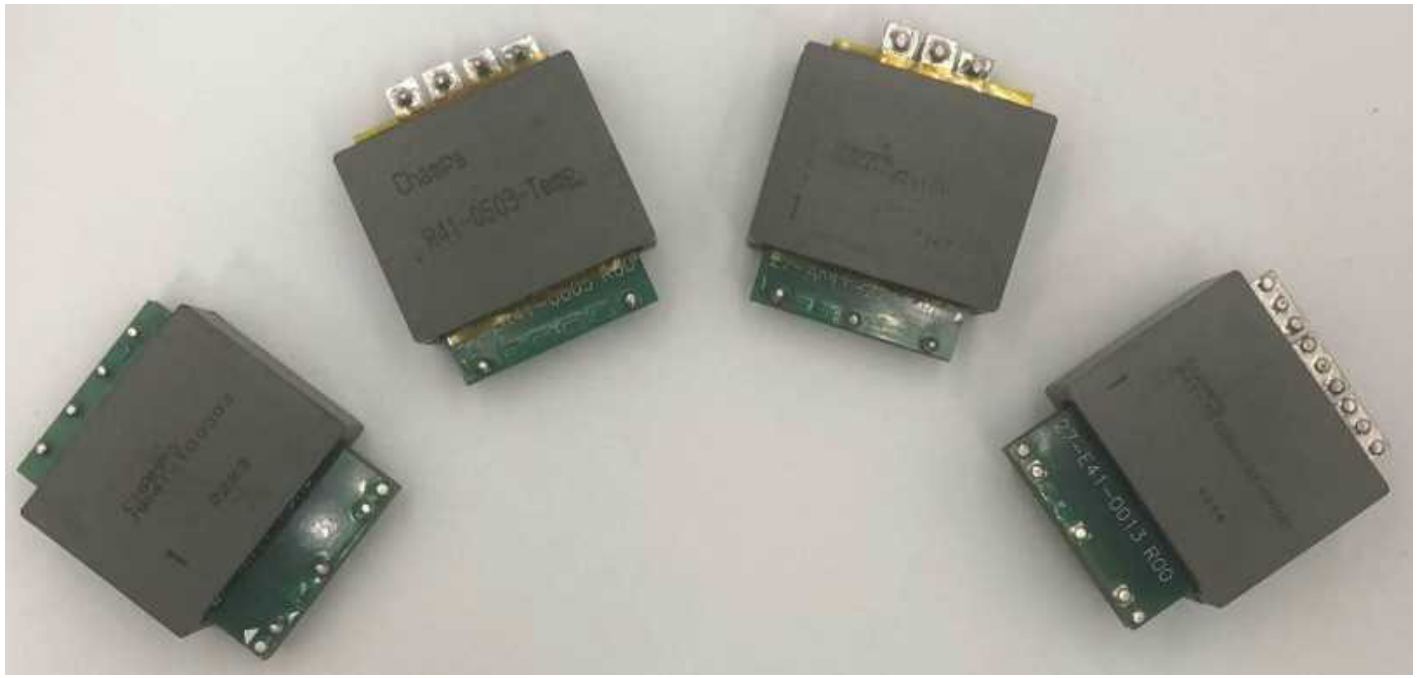
Champs-Tech R41 Size PSFB: FWCT + Current Doubler Transformers



General Notes:

1. Proven in actual PSFB to Current Doubler and FWCT configured DC-DC converter applications.

2. In other applications the R41 PSFB Series can operate over a wider Vin range or configured for different Input & Output Voltage and Rated Power. Increased height allows increased power output due to higher current capability. Adding effective thermal conduction with thermal pads in combination with heat sinks and clamps allows for higher power throughput at rated ambient and hot spot temperatures.

3. Size: 40.6mm wide x 49.3mm length x 15.2mm Height

4. Multilayer PCB optimization for lowest AC resistance & Proximity Loss Effect

5. Integer Turns available from 1T to 40T. Can be used as Primary or Secondary. Mechanical configuration and outline allow for a “flex” arrangement. Contact factory for information on any power topology design.

6. All designs can be supplied with planar windings embedded in the pcb of the Main Module of the converter. Heat Sink and installed power components SM assembly and installation and incorporation into a module are also available.

7. Wide variety of PNs, Designs and Turns Ratios in stock. If not listed, Contact Us

8. Surface Mount, Thru-Hole, Pad-to-Pad, Embedded Planar Windings as Options

R41 PSFB Series Catalog

1. Input Voltage Range 17-42.

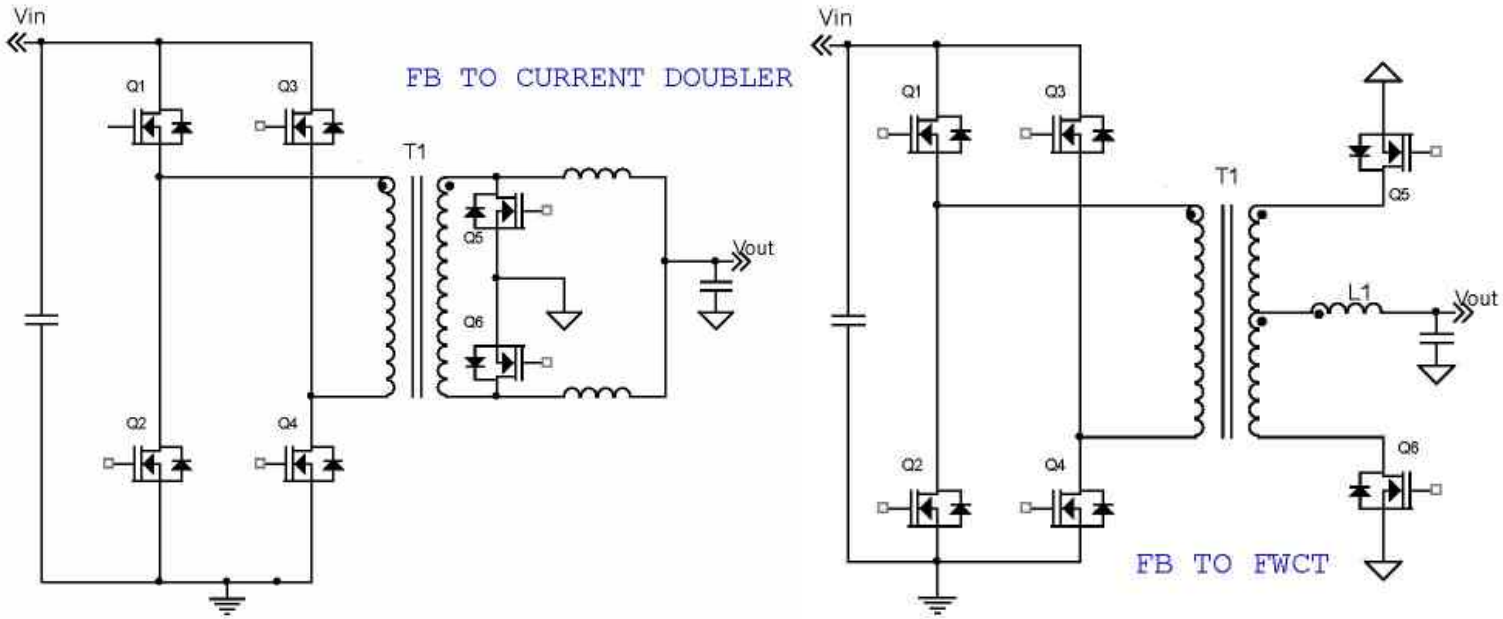
Champs PN	Vin (Min)	Vin (Max)	Vout	Iout (Adc)	Pout (Watts)	Freq (KHz)	Ton [uSec]	Half Period Duty	Full Period Duty
R41R6-0304-LF-TP-TH	20	35	12	60	720	200	2.32	46.4%	92.7%
Output Inductor PN	**Induct [uH]**	**Toff Max [uSec]**	**Vpk Secy**	**Isecy [Pk Nom]**	**Ipri [Pk Nom]**	**Isecy [rms Nom]**	**Iripple [% Iout]**	**Core Loss [Watt]**	**Cu Loss [Watt]**
PQI26-3R-40-HX-TH	3.0	3.68	46.7	37.4	53	34.8	24.5	<1.0	5.0

2. Input Voltage Range 32-54.

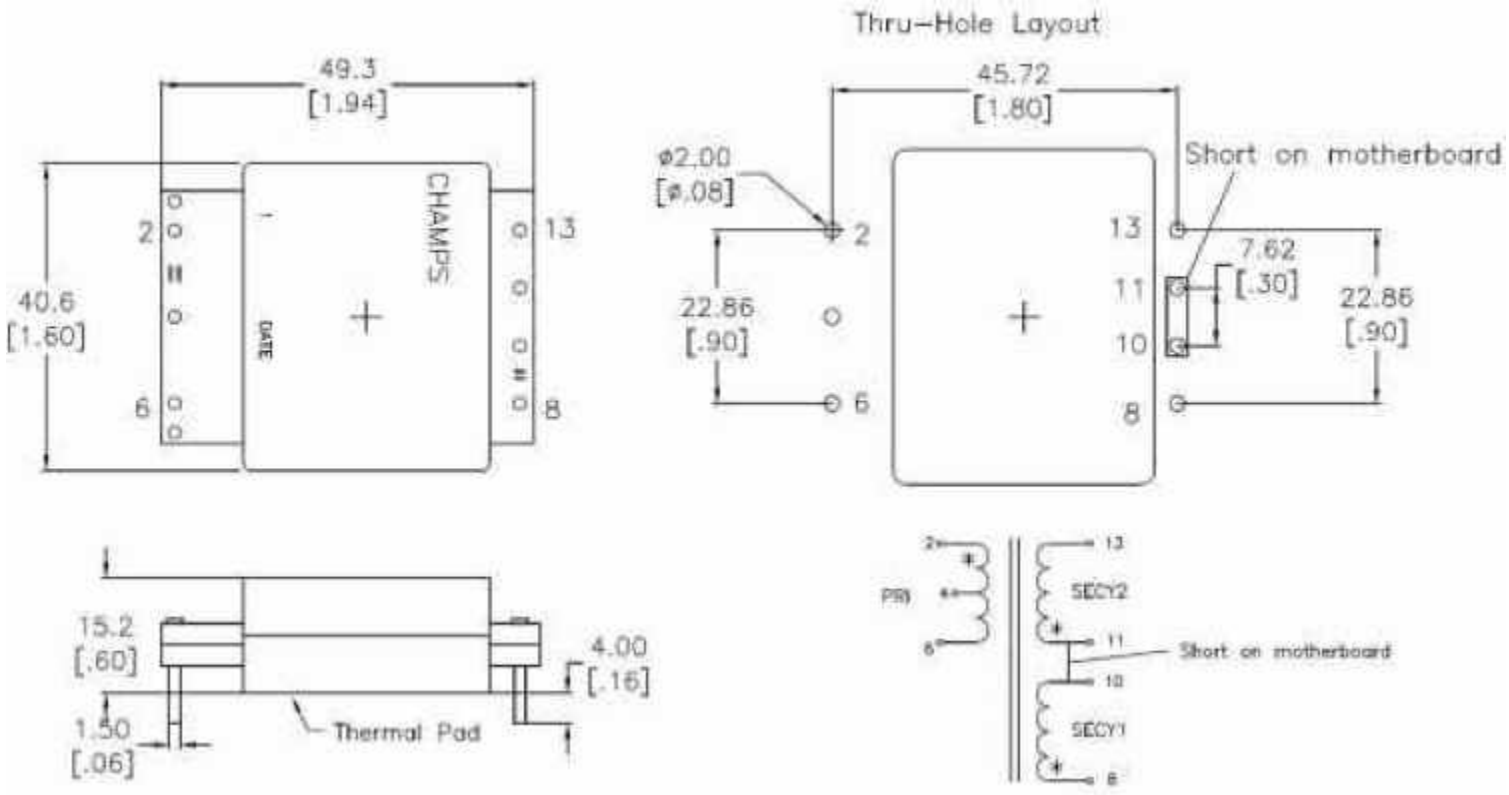
Champs PN	Vin (Min)	Vin (Max)	Vout	Iout (Adc)	Pout (Watts)	Freq (KHz)	Ton [uSec]	Half Period Duty	Full Period Duty
R41-0502-LF-TP-TH	43	53	7.0	80	560	125	3.35	41.9%	83.8%
Output Inductor PN	**Induct [uH]**	**Toff Max [uSec]**	**Vpk Secy**	**Isecy [Pk Nom]**	**Ipri [Pk Nom]**	**Isecy [rms Nom]**	**Iripple [% Iout]**	**Core Loss [Watt]**	**Cu Loss [Watt]**
PQI26-1R4-HX-TH	1.4	5.28	21.2	53.8	23.8	50	33	<1.0	2.8

3. Input Voltage Range 300-450.

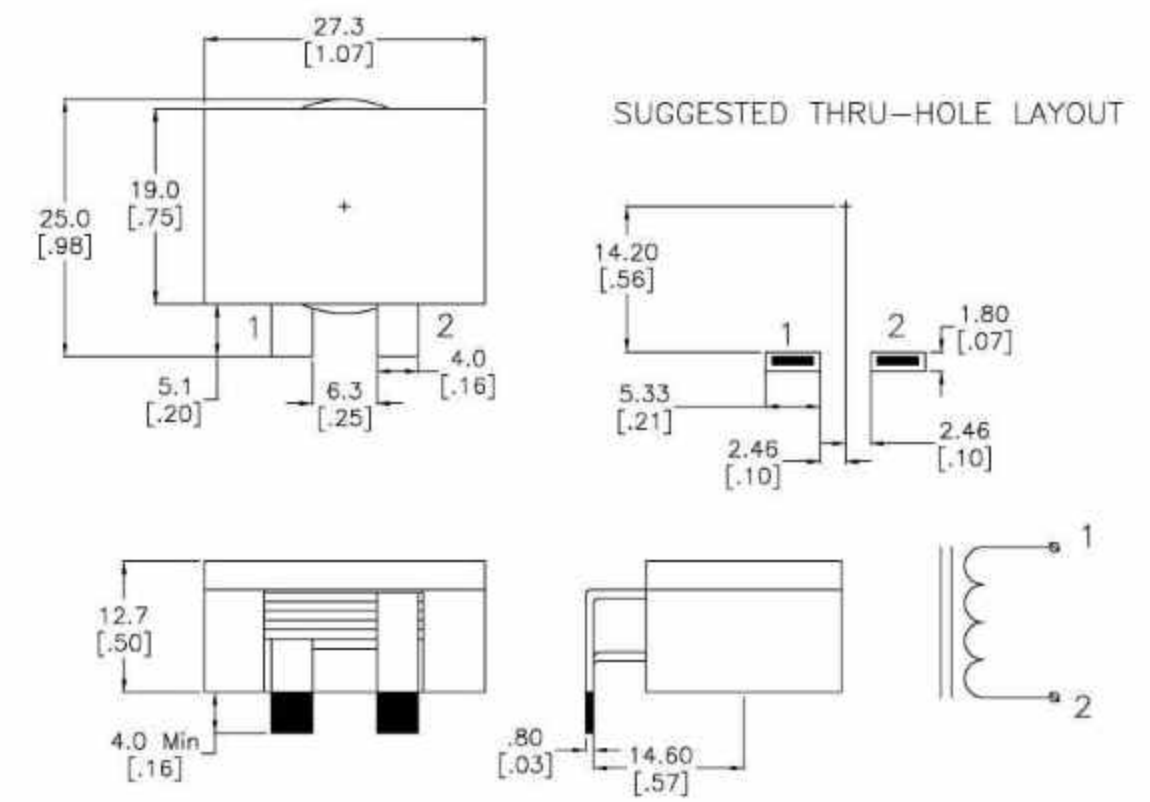
Champs PN	Vin (Min)	Vin (Max)	Vout	Iout (Adc)	Pout (Watts)	Freq (KHz)	Ton [uSec]	Half Period Duty	Full Period Duty
R41-180101-TP-TH	350	410	16.0	55	880	125	3.39	42.4%	84.8%
Output Inductor PN	**Induct [uH]**	**Toff Max [uSec]**	**Vpk Secy**	**Isecy [Pk Nom]**	**Ipri [Pk Nom]**	**Isecy [rms Nom]**	**Iripple [% Iout]**	**Core Loss [Watt]**	**Cu Loss [Watt]**
PQI26-4R7-36-HX-TH	4.7	5.10	45.6	36.4	5.7	32	30.9	3.0	2.0



Full Bridge to Current Doubler Schematic | Full Bridge to FWCT Schematic



R41 Size Generic Mechanical Drawing



PQI26 Size Generic Output Inductor Mechanical Drawing