

# Bill Of Materials for Treg TS-4b

**Design Title** Treg TS-4b  
**Author** Jan Didden  
**Document Number**  
**Revision** V4-b  
**Design Created** Wednesday, August 14, 2019  
**Design Last Modified** Thursday, September 3, 2020  
**Total Parts In Design** 45

## 0 Modules

<u>Quantity</u>	<u>References</u>	<u>Value</u>	<u>mouser</u>	<u>Description</u>
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Sub-totals:

## 7 Capacitors

<u>Quantity</u>	<u>References</u>	<u>Value</u>	<u>mouser</u>	<u>Description</u>
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1	C1	33u/16V		33u/16V Radial Electrolytic Capacitor 2.5mm/0.1 pitch
1	C2	1u/16V		1u Radial 63V Electrolytic Capacitor 2.5mm/0.1pitch
2	C3-C4	100nF/630	667-ECW-FD2J104KQ	Film Capacitors 630VDC 0.1uF 10% MPP L/S=10mm
1	C6	1u/630	667-ECW-FD2J105J	Film Capacitors 630VDC 1.0uF 5% MPP L/S=22.5mm
1	C7	10u/16V		10u Radial16V Electrolytic Capacitor 2.5mm/0.1pitch
1	C11	1u/50V	81-GCM31MR71H105JA5L	MLCC - SMD/SMT 1.0uF 25V X5R 10% size 1206

Sub-totals:

## 16 Resistors

<u>Quantity</u>	<u>References</u>	<u>Value</u>	<u>mouser</u>	<u>Description</u>
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1	R1	56k		56k 0.25W 1% MF
1	R2	3.9k		3.9k 0.25W 1% MF
1	R3	1.2k		1.2k 0.25W 1% MF
1	R4	1.5k		1.5k 0.25W 1% MF
1	R5	220		220 0.25W 1% MF
1	R6	22		22R 0.25W 1% MF
1	R7	33K		33k 0.25W 1% MF
1	R8	6.8		6.8R 0.25W 1% MF
1	R9	100		100 0.25W 1% MF
1	R10	2.2R		2.2R 0.25W 1% MF
1	R11	220k		nom. value for 130V; 1W high-voltage, set Vout; see text.

1	R12	5.6k	5.6k 0.25W 1% MF
2	R13-R14	1k	1k 0.25W 1% MF
1	R15	1.8k	1.8k 0.25W 1% MF
1	R16	2.2R	1W MF set current limit; min. value; see text

Sub-totals:

## 2 Integrated Circuits

<u>Quantity</u>	<u>References</u>	<u>Value</u>	<u>mouser</u>	<u>Description</u>
1	U1	LT3092	584-LT3092EST#PBF	Floating current source/regulator.
1	U2	AD8031	584-AD8031ANZ	Low Noise, High Speed Audio Operational Amplifier

Sub-totals:

## 7 Transistors

<u>Quantity</u>	<u>References</u>	<u>Value</u>	<u>mouser</u>	<u>Description</u>
2	Q1,Q7	FDP12N60NZ	512-FDP12N60NZ	N-Channel MOSFET 600V 12A do not substitute; use only one! See text.
3	Q2-Q3,Q6	BC546B	821-BC546BB1G	or anyleq. NPN small signal TO-92
1	Q5	BC556B	512-BC556ABU	or any eq. PNP small signal TO-92
1	Q8	IOTP08N100D2	747-IOTP08N100D2	1000V depletion mode MOSFET; alternative IOTP01N100D2; do not substitute others.

Sub-totals:

## 8 Diodes

<u>Quantity</u>	<u>References</u>	<u>Value</u>	<u>mouser</u>	<u>Description</u>
2	D1-D2	1N4007	863-1N4007RLG	Silicon Rectifier 1000V 1.0A
1	D3	SB140-T	621-SB140-T	replace by two anti-parallel diodes - important! See update May 2020 at <a href="http://linearaudio.nl">linearaudio.nl</a>
1	D4	Z5.6	78-BZX55C5V6-TAP	5.6V 0.5W Zener Diode
1	D5	Z12	78-BZX55B12-TAP	12V 0.5W Zener Diode
1	D6	LED	604-WP710A10VBC/D	High efficiency LED 3mm 0.1pitch
2	D7A,D7B	SB140-T	621-SB140-T	Schottky - 30.0V 0.200A 5.00ns

Sub-totals:

## 5 Miscellaneous

<u>Quantity</u>	<u>References</u>	<u>Value</u>	<u>mouser</u>	<u>Description</u>
1	HS1	Heatsink	756-WMHP-HS-25AB005	alternative Fischer SK109, SK129 types. See text.
1	J2	Vraw	651-1985849	5mm / 0.2in screw terminal block
1	J3	Vout	651-1985849	5mm / 0.2in screw terminal block
1	SW1	SPST-MOM	706-95C04A3GWRT	SPST Push Button
1	VR1	5k	72-T93YA502JT20	5k multiterm trimmer

Sub-totals:

Totals: