# Tiny Push-pull Transformers WE-PPTI in size 1308

Surface Mount - SMT





### Characteristics

- Tiny Push-Pull Transformers
- Low Profile
- Surface Mount
- 12V and 24V Inputs
- Currents up to 1100mA
- Operating temperature range -40°C to +125°C

## Approved for Texas Instruments SN6507

### Applications

- Solar inverters, protection relays
- Factory automation
- Building automation
- Medical instruments
- Motor drives: IGBT and SiC gatedriver supplies
- Isolated power supply for CAN, RS-485, RS-422,
- RS-232, SPI, I2C, low-power

Part Number	V <sub>In</sub> (V)	V <sub>out</sub> (V)	l <sub>out</sub> (mA) <sup>1</sup>	N <sub>sec</sub> /N <sub>prl</sub>	V-usec <sup>2</sup>	L <sub>pri</sub> min (µH)	L <sub>ikg</sub> max(µH)	DCR <sub>pri</sub> (Ω)	DCR <sub>sec</sub> (Ω)
750320324	12	3.3	1100	0.42	38	450	1.30	0.37	0.14
750319690	12	5	1500	0.57	24	100	0.75	0.17	0.12
750319691	12	12	625	1.14	23	100	0.50	0.14	0.19
750319692	12	15	500	1.33	20	100	0.40	0.13	0.18
750319693	12	24	400	2.29	23	100	0.40	0.11	0.32
750319949	12	30	250	2.75	38	350	0.50	0.28	1.80
750320325	24	3.3	1000	0.19	50	700	2.80	0.35	0.06
750319694	24	5	750	0.25	52	600	2.80	0.35	0.07
750319695	24	12	500	0.57	46	600	1.10	0.25	0.13
750319696	24	15	500	0.71	46	500	0.90	0.21	0.18
750319697	24	24	250	1.07	46	500	0.95	0.28	0.95
750319948	24	30	200	1.36	46	600	0.60	0.28	0.43

Note 1: For operation at 400kHz

Note 2: Bipolar operation

Dimensions



This electronic component has been designed and developed for usage in general electronic equipment. Before incorporating this component into any equipment where higher safety and reliability is especially required or if there is the possibility of direct damage or injury to human body, for example in the range of aerospace, aviation, nuclear control, submarine, transportation, (automotive control, ship control), transportation signal, disaster prevention, medical, public information network etc, Würth Elektronik eiSos GmbH have to be informed before the design-in stage. In addition, sufficient reliability evaluation checks for safety must be performed on every electronic component which is used in electrical circuits that require high safety and reliability functions or performance.

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SN6507 EVM Comparison Testing to Nearest Competitor





#### Efficiency (%) 90.0% 85.0% 80.0% 75.0% Efficiency (%) 70.0% 65.0% 60.0% 750319696 400KHz 55.0% 750319696 1MHz 50.0% Competitor 1MHz 45.0% 40.0% 0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5 0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 Load Current (A)



### Test Setup

- 24V to 15V version from both Würth and Competitor tested
- Used Texas Instruments SN6507
  EVM for testing with no component changes
- Competitor part 18% larger volume
- Würth part 10% lower profile
- Used same test setup
- Tested at 1MHz and 400kHz

### Test Results

- At 1MHz the Würth part ran much cooler than the competitor
- At 1MHz load regulation and efficiency were the same
- At 400kHz the Würth part efficiency is much greater than either part at 1MHz.
- The load regulation was much better at 400kHz than at 1MHz
- Competitor part did not function at 400kHz



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