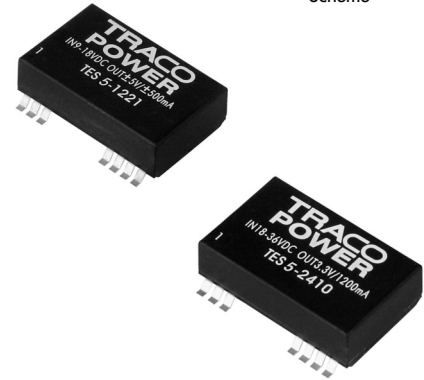


Features

- ◆ Compact low profile SMD package
- ◆ Wide 2:1 input voltage range
- ◆ I/O isolation 1500VDC
- ◆ Operating temp. range -40°C to +85°C max.
- ◆ Short circuit protection
- ◆ Remote On/Off
- ◆ High accuracy of pin co-planarity
- ◆ Lead free design – RoHS compliant
- ◆ 3-years product warranty



The TES-5 series is a new range of high performance 5W dc-dc converter modules in low profile SMD package with compact dimensions of only 33.4 x 20.6 x 10.2 mm. The 18 available models feature wide 2:1 input voltage range and tightly regulated output voltage. High efficiency allows operating temperatures up to 71°C at full load.

Further features are built-in EMI-filter to meet EN 55022, class A and FCC, level A without additional components and remote On/Off control. The products are qualified for soldering in a high temperature lead-free reflow solder process. Typical applications for these converters are battery powered equipment, instrumentation, communication systems and industrial controls.

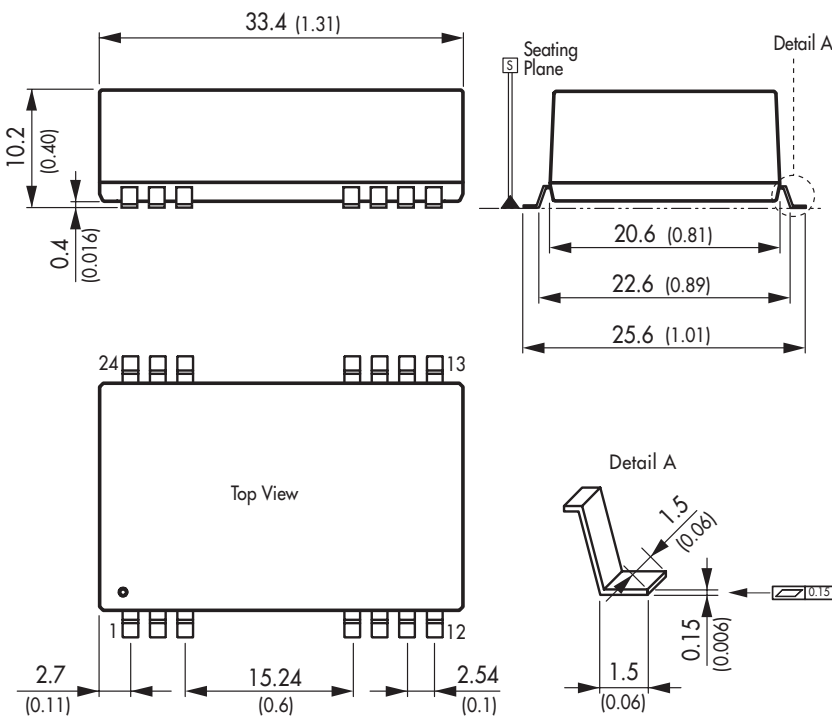
Models

| Ordercode | Input voltage range | Output voltage | Output current max. | Efficiency typ. |
|------------|---------------------------------|----------------|---------------------|-----------------|
| TES 5-1210 | 9 – 18 VDC (12 VDC nominal) | 3.3 VDC | 1200 mA | 76 % |
| TES 5-1211 | | 5 VDC | 1000 mA | 80 % |
| TES 5-1212 | | 12 VDC | 420 mA | 83 % |
| TES 5-1213 | | 15 VDC | 335 mA | 83 % |
| TES 5-1221 | | ±5 VDC | ±500 mA | 80 % |
| TES 5-1222 | | ±12 VDC | ±210 mA | 83 % |
| TES 5-1223 | | ±15 VDC | ±165 mA | 83 % |
| TES 5-2410 | 18 – 36 VDC (24 VDC nominal) | 3.3 VDC | 1200 mA | 78 % |
| TES 5-2411 | | 5 VDC | 1000 mA | 82 % |
| TES 5-2412 | | 12 VDC | 420 mA | 85 % |
| TES 5-2413 | | 15 VDC | 335 mA | 85 % |
| TES 5-2421 | | ±5 VDC | ±500 mA | 82 % |
| TES 5-2422 | | ±12 VDC | ±210 mA | 85 % |
| TES 5-2423 | | ±15 VDC | ±165 mA | 85 % |
| TES 5-4810 | 36 – 75 VDC (48 VDC nominal) | 3.3 VDC | 1200 mA | 78 % |
| TES 5-4811 | | 5 VDC | 1000 mA | 82 % |
| TES 5-4812 | | 12 VDC | 420 mA | 85 % |
| TES 5-4813 | | 15 VDC | 335 mA | 85 % |
| TES 5-4821 | | ±5 VDC | ±500 mA | 82 % |
| TES 5-4822 | | ±12 VDC | ±210 mA | 85 % |
| TES 5-4823 | | ±15 VDC | ±165 mA | 85 % |

Physical Specifications

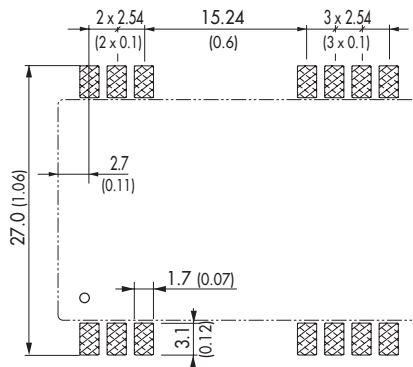
| | |
|--------------------------------|---|
| Casing material | non conductive plastic |
| Weight | 14 g (0.55oz) |
| Moisture sensivity level (MSL) | level 2 as per J-STD-020D.1 (to find at: www.jedec.org - free registration required) |
| Washing process | www.tracopower.com/products/smd-wash.pdf |
| Packaging | www.tracopower.com/products/tes5-pack.pdf |

Outline Dimensions



| Pin-Out | | |
|---------|---------------|---------------|
| Pin | Single | Dual |
| 1 | Remote On/Off | Remote On/Off |
| 2 | -Vin (GND) | -Vin (GND) |
| 3 | -Vin (GND) | -Vin (GND) |
| 9 | No con. | Common |
| 10 | No con. | No con. |
| 11 | No con. | -Vout |
| 12 | No con. | No con. |
| 13 | No con. | No con. |
| 14 | +Vout | +Vout |
| 15 | No con. | No con. |
| 16 | -Vout | Common |
| 22 | +Vin (Vcc) | +Vin (Vcc) |
| 23 | +Vin (Vcc) | +Vin (Vcc) |
| 24 | No con. | No con. |

Pin Patterns:



Dimensions in [mm], () = Inch
Tolerances ± 0.25 (± 0.02)
Pin pitch tolerances ± 0.13 (± 0.005)

Specifications can be changed without notice! Make sure you are using the latest documentation, downloadable at www.tracopower.com