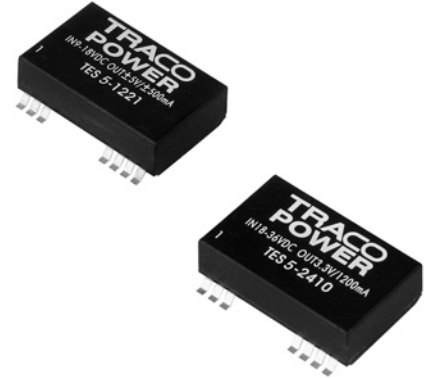


Features

- ◆ 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.

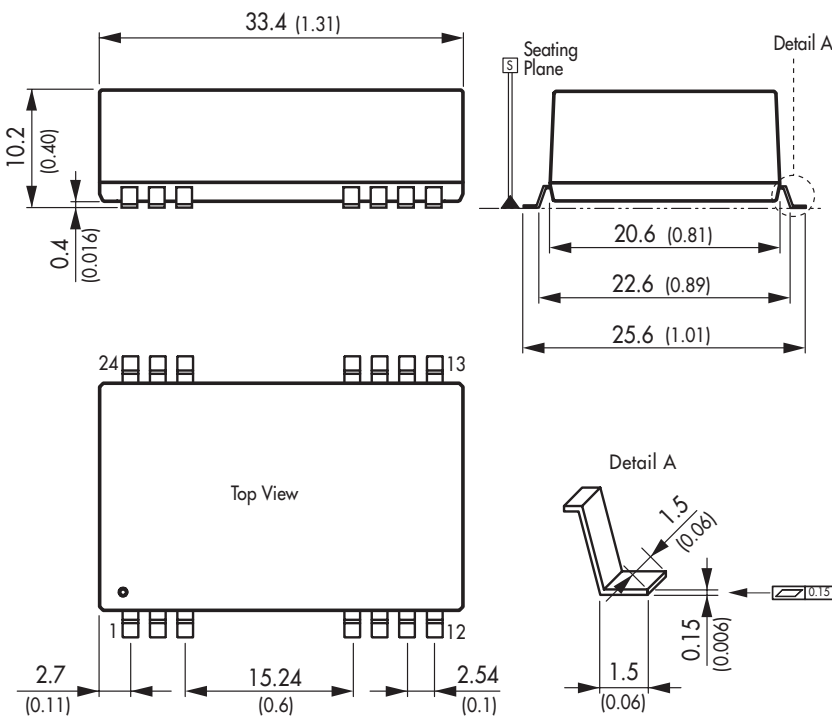
Models

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

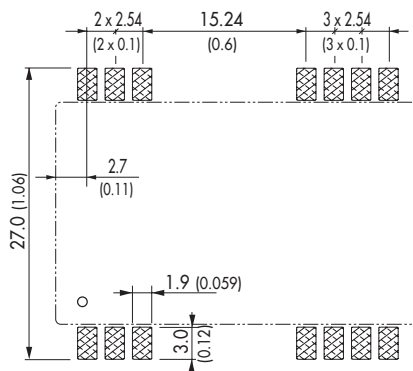
Casing material	non conductive plastic
Potting material	epoxy (UL 94V-0 rated)
Weight	14 g (0.55oz)
Lead-free reflow solder process	as per J-STD-020D.01 (to find at: www.jedec.org - free registration required)
Moisture sensivity level (MSL)	level 2 as per J-STD-033B.01 (to find at: www.jedec.org - free registration required)
Washing process	www.tracopower.com/products/smd-wash.pdf
Packaging	www.tracopower.com/products/tes5-pack.pdf

Outline Dimensions



Pin	Pin-Out	
	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 any time without notice