

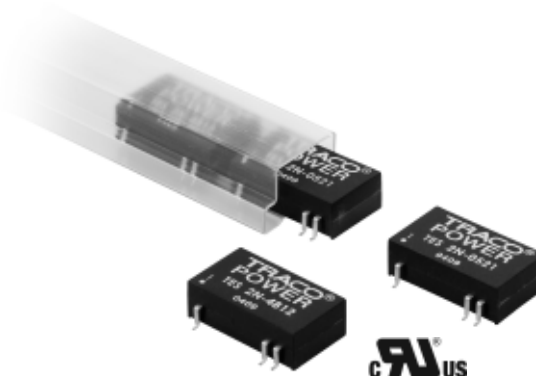
DC-DC Converters

**POWER
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TES 2N Series, 2 Watt

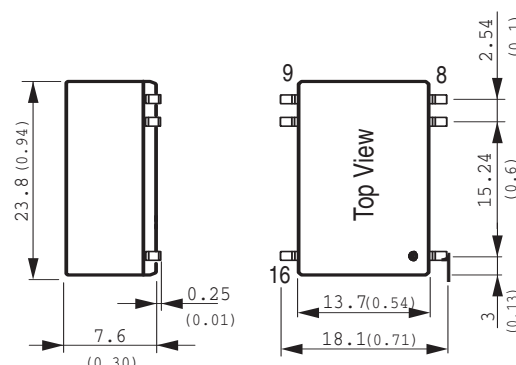
- Ultracompact SMD-Package
- Wide 2:1 Input Range
- Regulated Output
- I/O Isolation 1500 VDC
- Operating Temperature Range -40°C to $+71^{\circ}\text{C}$
- Low Ripple and Noise
- Short Circuit Protection
- Input Filter to meet EN 55022, Class A
- Reflow solder temperature up to 250°C



Line regulation:	$\pm 0.5\%$ max.
Load regulation:	Single output models: $\pm 0.75\%$ max. Dual output models: $\pm 2.0\%$ max.
Ripple & Noise:	< 50 mVpk-pk (20 MHz BW)
Conducted EMI:	EN55022, class A, and FCC, level A (internal filter)
Short circuit protection:	continuous, automatic recovery
Efficiency:	78% typ.
Operating temperature range:	-40°C ... $+71^{\circ}\text{C}$
I/O isolation voltage:	1500 VDC
Safety standards:	cUL/UL 60950, IEC/EN 60950
Case:	plastic (UL 94V-0 rating)

Models			
Order Code	Input voltage	Output voltage	Output current max.
TES 2N-0510	4.5 – 9 VDC	3.3 VDC	500 mA
TES 2N-0511		5 VDC	400 mA
TES 2N-0512		12 VDC	165 mA
TES 2N-0513		15 VDC	135 mA
TES 2N-0521		± 5 VDC	± 200 mA
TES 2N-0522		± 12 VDC	± 85 mA
TES 2N-0523		± 15 VDC	± 65 mA
TES 2N-1210	9 – 18 VDC	3.3 VDC	500 mA
TES 2N-1211		5 VDC	400 mA
TES 2N-1212		12 VDC	165 mA
TES 2N-1213		15 VDC	135 mA
TES 2N-1221		± 5 VDC	± 200 mA
TES 2N-1222		± 12 VDC	± 85 mA
TES 2N-1223		± 15 VDC	± 65 mA
TES 2N-2410	18 – 36 VDC	3.3 VDC	500 mA
TES 2N-2411		5 VDC	400 mA
TES 2N-2412		12 VDC	165 mA
TES 2N-2413		15 VDC	135 mA
TES 2N-2421		± 5 VDC	± 200 mA
TES 2N-2422		± 12 VDC	± 85 mA
TES 2N-2423		± 15 VDC	± 65 mA
TES 2N-4810	36 – 72 VDC	3.3 VDC	500 mA
TES 2N-4811		5 VDC	400 mA
TES 2N-4812		12 VDC	165 mA
TES 2N-4813		15 VDC	135 mA
TES 2N-4821		± 5 VDC	± 200 mA
TES 2N-4822		± 12 VDC	± 85 mA
TES 2N-4823		± 15 VDC	± 65 mA

Pin-Out		
Pin	Single Output	Dual Output
1	– Vin (GND)	– Vin (GND)
7	No con.	No con.
8	No con.	Common
9	+ Vout	+ Vout
10	– Vout	– Vout
16	+ Vin	+ Vin



() = Inches