

DC-DC Converters

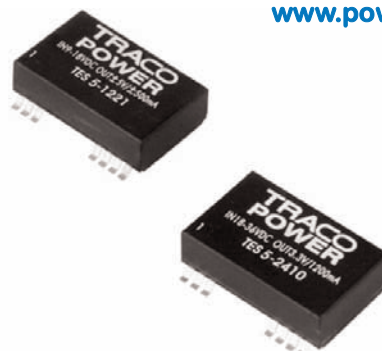
**POWER
SOLVE**

TES5 Series, 5 Watt

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Features

- Compact SMD package
- Wide 2:1 input voltage range
- Fully regulated output
- Short circuit protection
- Input filter to meet EN 55022 class A
- Qualified for leadfree reflow solder process



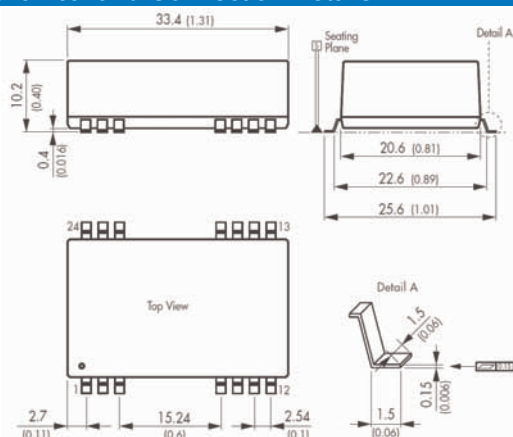
Electrical Specification

Input filter	EN 55022 class A & FCC level A (internal filter)
Short Circuit Protection	Continuous, automatic recovery
Operating Temperature Range	-40°C to +85°C (derate at 3.5%/°C above 70°C)
I/O Isolation test voltage	1500VDC
Safety Approvals	cUL/UL 60950-1, IEC/EN 60950-1, CB report
Remote On/Off	Shutdown input for low input current (10mA) in standby operation
Casing	Plastic (UL94V-0 rated)

Output Voltage and Current Ratings

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE	LINE REG.	LOAD REG.	EFFICIENCY
TES 5-1210	9 - 18VDC	3.3VDC	1200mA	85mV pk-pk max.	0.3%	1.0%	76%
TES 5-1211		5VDC	1000mA	85mV pk-pk max.	0.3%	1.0%	80%
TES 5-1212		12VDC	420mA	85mV pk-pk max.	0.3%	1.0%	83%
TES 5-1213		15VDC	335mA	85mV pk-pk max.	0.3%	1.0%	83%
TES 5-1221		±5VDC	±500mA	85mV pk-pk max.	0.3%	2.0%	80%
TES 5-1222		±12VDC	±210mA	85mV pk-pk max.	0.3%	2.0%	83%
TES 5-1223	18 - 36VDC	±15VDC	±165mA	85mV pk-pk max.	0.3%	2.0%	83%
TES 5-2410		3.3VDC	1200mA	85mV pk-pk max.	0.3%	1.0%	78%
TES 5-2411		5VDC	1000mA	85mV pk-pk max.	0.3%	1.0%	82%
TES 5-2412		12VDC	420mA	85mV pk-pk max.	0.3%	1.0%	85%
TES 5-2413		15VDC	335mA	85mV pk-pk max.	0.3%	1.0%	85%
TES 5-2421		±5VDC	±500mA	85mV pk-pk max.	0.3%	2.0%	82%
TES 5-2422	36 - 75VDC	±12VDC	±210mA	85mV pk-pk max.	0.3%	2.0%	85%
TES 5-2423		±15VDC	±165mA	85mV pk-pk max.	0.3%	2.0%	85%
TES 5-4810		3.3VDC	1200mA	85mV pk-pk max.	0.3%	1.0%	78%
TES 5-4811		5VDC	1000mA	85mV pk-pk max.	0.3%	1.0%	82%
TES 5-4812		12VDC	420mA	85mV pk-pk max.	0.3%	1.0%	85%
TES 5-4813		15VDC	335mA	85mV pk-pk max.	0.3%	1.0%	85%
TES 5-4821		±5VDC	±500mA	85mV pk-pk max.	0.3%	2.0%	82%
TES 5-4822		±12VDC	±210mA	85mV pk-pk max.	0.3%	2.0%	85%
TES 5-4823		±15VDC	±165mA	85mV pk-pk max.	0.3%	2.0%	85%

Mechanical and Connection Details



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