

# TES-2M Series

## 2 Watt DC/DC Converters

**TRACOPOWER**  
Medical Approved / High Isolation / Reinforced Insulation



### FEATURES:

DIMENSIONS: 0.94 x 0.54 x 0.35"

- Ultracompact SMD package
- I/O isolation 4000 VACrms
- Reinforced insulation rated for working voltage up to 300 VAC
- Industrial and medical safety approval
- Operating temperature range -40 °C to +71°C
- Qualified for leadfree reflow solder process
- Available in tape & reel package
- 3 Year Warranty

### INPUT SPECIFICATIONS:

ISOLATION (V/O)	4000 VACrms, rated for 300 VAC working voltage
SETPOINT ACCURACY	±2% Typical (4% max)
TRIM RANGE	Fixed
REGULATION	Line unregulated / Load 10% (except 5V=12%)
RIPPLE	<150 mVpk-pk (20 MHz BW)
OVER CURRENT	limited 0.5 sec.
SHORT CIRCUIT	Continuous, auto-recovery
OPERATING TEMPERATURE	-40°C to +71°C (above 60°C derating 2.5 %/K)
STORAGE TEMPERATURE	-40 ~ +125°C
COOLING	Convection
WEIGHT	3.8 g (0.13oz)
PACKAGE	Plastic Surface Mount Package (UL94V-0)
SAFETY	CSA/UL 60950-1, CB Report IEC/EN 60950-1 CSA/UL 60601-1, CB Report IEC/EN 60601-1

### MODELS:

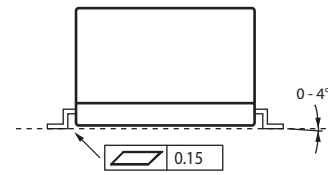
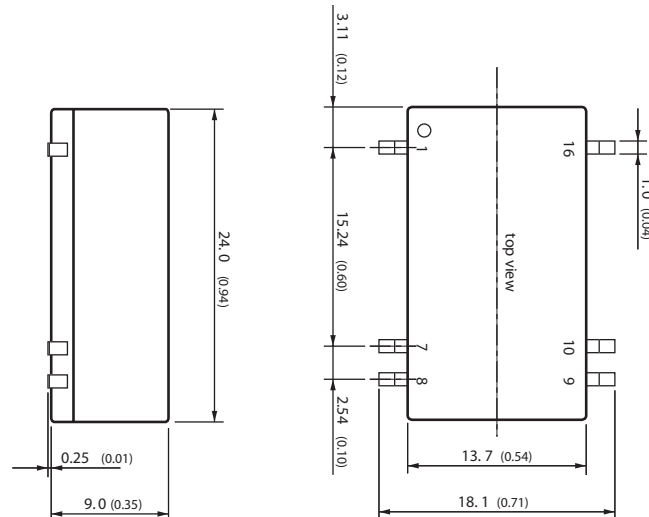
MODEL	INPUT	OUTPUT(S)	EFFICIENCY
<b>TES2-0511M</b>	4.5-5.5	5V 400mA	66%
<b>TES2-0512M</b>	4.5-5.5	12V 165mA	66%
<b>TES2-0513M</b>	4.5-5.5	15V 133mA	66%
<b>TES2-0522M</b>	4.5-5.5	+12V 83mA    -12V 83mA	72%
<b>TES2-0523M</b>	4.5-5.5	+15V 66mA    -15V 66mA	73%
<b>TES2-1211M</b>	10.8-13.2	5V 400mA	66%
<b>TES2-1212M</b>	10.8-13.2	12V 165mA	66%
<b>TES2-1213M</b>	10.8-13.2	15V 133mA	66%
<b>TES2-1222M</b>	10.8-13.2	+12V 83mA    -12V 83mA	74%
<b>TES2-1223M</b>	10.8-13.2	+15V 66mA    -15V 66mA	75%
<b>TES2-2411M</b>	21.6-26.4	5V 400mA	66%
<b>TES2-2412M</b>	21.6-26.4	12V 165mA	66%
<b>TES2-2413M</b>	21.6-26.4	15V 133mA	66%
<b>TES2-2422M</b>	21.6-26.4	+12V 83mA    -12V 83mA	74%
<b>TES2-2423M</b>	21.6-26.4	+15V 66mA    -15V 66mA	75%

### DOWNLOADS:

Download Copy of this specification:  
<http://www.powergatellc.com/pdfs/tes2m.pdf>

Detailed Spec:  
<http://www.tracopower.com/products/tes2m.pdf>

### OUTLINE DRAWING:



Dimensions in [mm], ( ) = Inch  
 Tolerances ±0.25 (0.01)  
 Pin pitch tolerances ±0.05 (0.002)

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