

78ST300 Series

3 AMP POSITIVE STEP-DOWN INTEGRATED SWITCHING REGULATOR

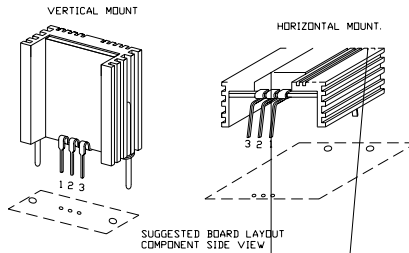
- High Efficiency > 80%
- Wide Input Range
- Self-Contained Inductor
- Short-Circuit Protection
- Over-Temperature Protection
- Fast Transient Response

The 78ST300 is a series of wide input voltage, 3 terminal Integrated Switching Regulators (ISRs). Employing a ceramic substrate, these ISRs have a maximum output current of 3A. The output voltage is laser trimmed for high accuracy.

The 78ST300 series regulators have internal short-circuit and over-temperature protection and may be used in a wide variety of applications.

Standard Application

C1 = Optional 1 μ F ceramic
C2 = Required 100 μ F electrolytic



Pin-Out Information

Pin No.	Function
1	V _{in}
2	GND
3	V _{out}

Ordering Information

78ST3 XX Y C

Output Voltage
05 = 5.0 Volts

Package Suffix
V = Vertical Mount
H = Horizontal Mount

Specifications

Characteristics (T _a = 25°C unless noted)	Symbols	Conditions	78ST300 SERIES			
			Min	Typ	Max	Units
Output Current	I _o	Over V _{in} range	0.1*	—	3.0	A
Input Voltage Range	V _{in}	I _o = 0.1 to 3.0A	8	—	20	V

CHARACTERISTIC DATA

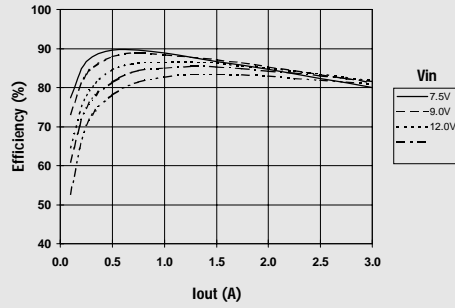
78ST300

Series

78ST305_ 5.0 VDC

(See Note 1)

Efficiency vs Output Current



Ripple vs Output Current



Power Dissipation vs Output Current



Note 1: All data listed in the above graphs, except for derating data, has been developed from actual products tested at 25°C. This data is considered typical data for the ISR.
Note 2: Thermal derating graphs are developed in free air convection cooling of 40-60 LFM. (See Thermal Application Note)

