

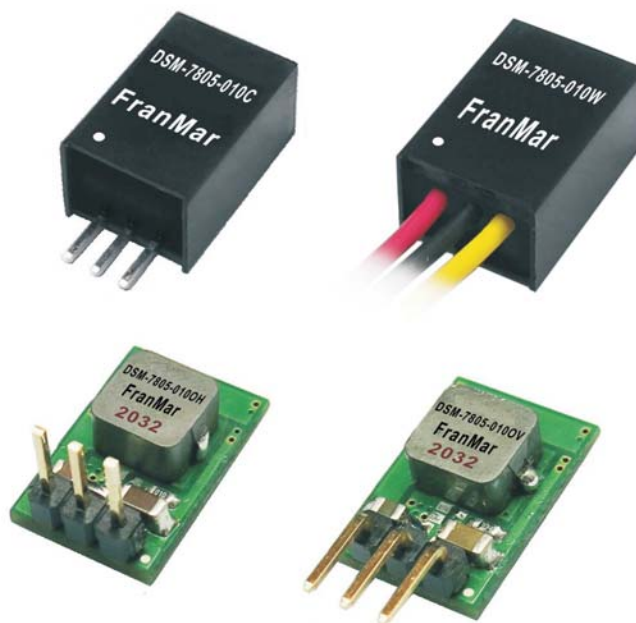
1.0A Non-Isolated DC-DC Converter High Efficiency Switching Regulator

FEATURES

- ◆ Single in line package
- ◆ Wide input range up to 36V
- ◆ High efficiency up to 96%
- ◆ Over temperature protection
- ◆ Over load protection
- ◆ **Support negative output**
- ◆ Short circuit protection

APPLICATION

- ◆ Voltage step down
- ◆ Power supplies
- ◆ Industrial PC
- ◆ Digital set-top boxes
- ◆ Data communications
- ◆ Microcontroller related applications
- ◆ Point of load regulator in distributed power system



SPECIFICATIONS

Input Voltage 36VDC Max.
 Input Surge Voltage 40VDC max.(100ms max.)
 Input Filter Capacitor type
 Input Protection Fuse recommended
 Output Voltage Accuracy $\pm 3\%$ max.
 Rated Power 3.3W~15W
 Ripple & Noise 100mVp-p max.
 Line Regulation $\pm 0.2\%$; 3.3V: $\pm 0.3\%$
 Load Regulation $\pm 0.3\%$; 3.3V: $\pm 0.4\%$
 Output Frequency 500Hz typ.
 Short Circuit Protection continuous, recovery
 Over Load Protection 200%~300%
 Over Temp. Protection ... recovers automatically after fault condition is removed

Cooling Free-air convection
 Working Temperature -40~+85°C with derating
 Case Temperature +110°C max.
 Working Humidity 5~95% RH non-condensing
 Storage Temp., Humidity -55~+125°C, 10~95% RH non-condensing
 Temperature Coefficient 0.03%/°C (0~71°C)
 Soldering Temperature 1.5mm from case of 3~5 sec./265°C max.
 Vibration 10~500Hz, 2G 10min./1 cycle, period for 60 min. each along X, Y, Z axes
 Isolation Voltage Non-Isolation
 EMC Standard EN55032 class B ; EN61000-4-2,3,4,5,6
 MTBF >1,800,000 Hours
 Dimension(L*W*H) Case size 11.5*9.0*17.5mm
 Open frame size 10.5*7.5*16mm
 Case Material Non-conductive plastic

All specifications are measured at $T_a = 25^\circ\text{C}$, humidity < 75%, nominal input voltage, and rated output load

Model Number	Input Voltage (VDC)	Input Current (mA)	Output Voltage (VDC)	Output Current (mA)	EFF. (%) @Vin min.	Capacitor Load (Max.)
DSM-7803-010XX	6~36	611	3.3	1000	90	680uF
DSM-7805-010XX	8~36	672	5	1000	93	470uF
DSM-7809-010XX	13~36	729	9	1000	95	220uF
DSM-7812-010XX	16~36	781	12	1000	96	220uF
DSM-7815-010XX	20~36	781	15	1000	96	150uF

Special Feature Negative Output Voltage

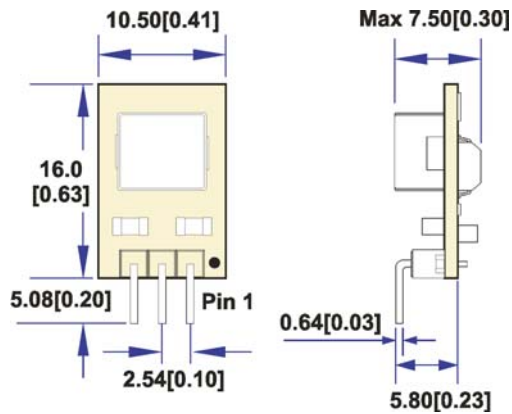
Model Number	Input Voltage (VDC)	Input Current (mA)	Output Voltage (VDC)	Output Current (mA)	EFF. (%) @Vin min.	Capacitor Load (Max.)
DSM-7805-005XX	8~27	355	-5	-500	88	470uF
DSM-7812-003XX	8~20	506	-12	-300	89	220uF
DSM-7815-003XX	8~18	630	-15	-300	89	150uF

Note:

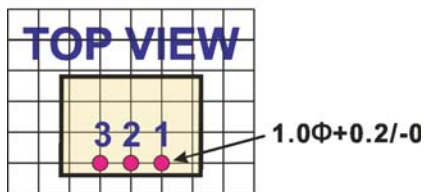
- For input voltages higher than 30VDC, an input capacitor (22uF) is required
- XX = OV : open frame with vertical mount ; OH : open frame with horizontal mount ; P: potting ; W: wired

MECHANICAL DRAWING (Unit: mm)

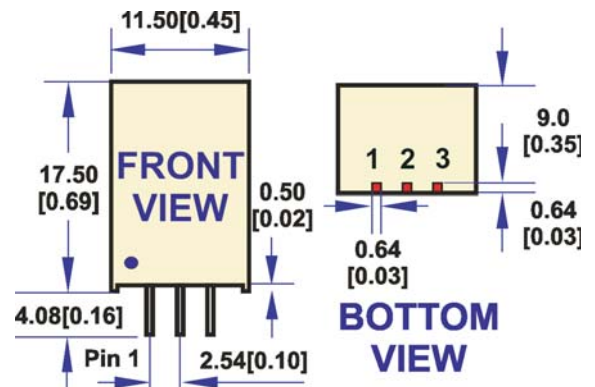
OV Type



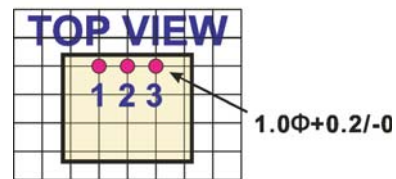
GRID: 2.54 mm



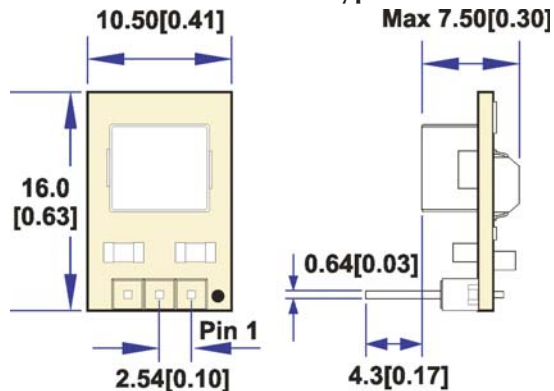
P Type



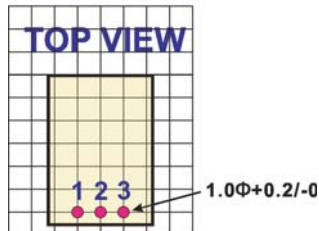
GRID: 2.54 mm



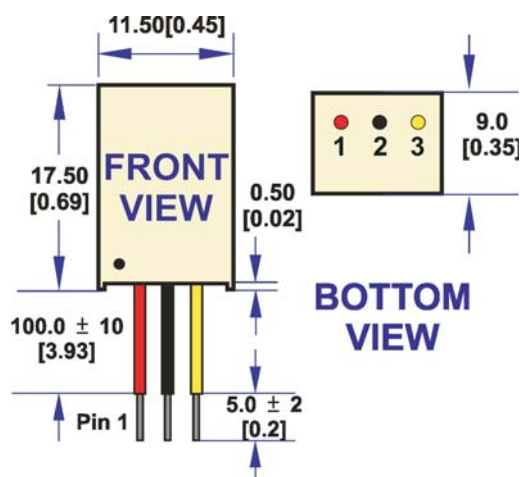
OH Type



GRID: 2.54 mm



W Type



PIN CONNECTION

PIN	+OUTPUT	-OUTPUT
1	+Vin	+Vin
2	GND	-Vout
3	+Vout	GND

All dimensions are in mm [Inches]

Pin size is 0.64*0.64mm ±0.10mm

Tolerance .X or .XX = ±0.5mm

PIN CONNECTION

PIN	+OUTPUT	-OUTPUT
1 (RED)	+Vin	+Vin
2 (BLACK)	GND	-Vout
3 (YELLOW)	+Vout	GND

All dimensions are in mm [Inches]

Tolerance .X or .XX = ±0.5mm

Wire outside diameter = 1.6mm ±0.1

Wire core diameter = 0.75mm ±0.1

Wire is UL 3385/CAS tem listed #22AWG /300V /105°C Rated