



**Features**

- High efficiency – **Synchronous Rectifier Topology**
- 2250V **Isolated Insulation** (input to output)
- Patented architecture and control
- **On-board** Input differential **PI-filter**
- 4:1 input ranges: **18 – 75Vdc**
- **IEC950/EN60950/UL1950** pending
- Industry-Standard **DOSA** pinout
- Standard **1/16<sup>th</sup> Brick** Foot-print:0.9” by 1.3”
- SMT or PTH versions
- Fixed-frequency Operation
- Hiccup Overcurrent protection
- Fully protected: OVP, OTP, OCP and UVLO
- Remote Sense & Remote Enable Control

**Description**

**EST** Series high-current, high-efficiency, open-frame, isolated converters are designed to compatible with industry **Sixteenth Brick Standard** footprint and pin assignment. The ultra-wide 18 to 75V input range facilitates operation from 24V and 48V; eliminating the need for multiple host-system circuit-pack designs, and reducing the number of brick part numbers in inventory, in applications such as wireless base stations.

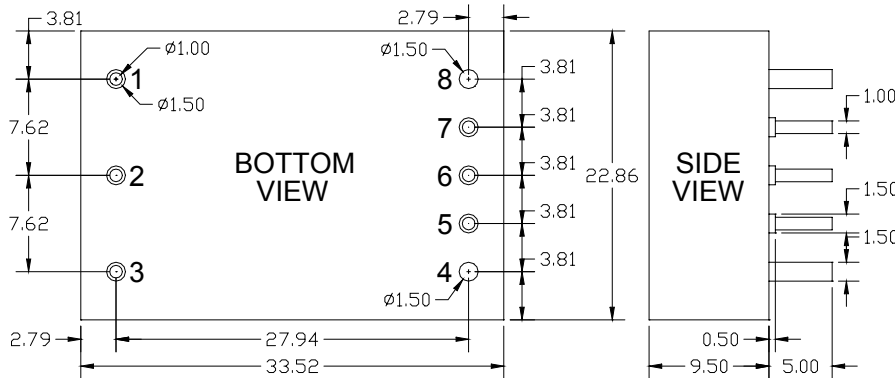
Features are basic insulation, start-up into highly-capacitive loads, and low conducted and radiated EMI. Interface features include: remote on/off, remote output voltage sensing, and industry-standard output trim. Protections include: over-voltage, under-voltage, over-current, and over-temperature.

**Model Selection Guide**

Typical @ Ta=+25°C under nominal line voltage and full load conditions unless noted.

Model	Input				Output			Efficiency @FL
	Voltage (Volts)		Current (A)		Voltage (V)	Current (A)	Power (W)	
	Nominal	Range	No load	Full load				Typ.
<b>EST48050-10-E</b>	48	36-75	0.10	1.15	5.0	10	50	91%
<b>EST48033-15-E</b>	48	36-75	0.10	1.15	3.3	15	50	90%
<b>EST48018-20-E</b>	48	36-75	0.10	0.86	1.8	20	36	87%
<b>EST36050-08-E</b>	36	18-75	0.10	1.24	5.0	8	40	90%
<b>EST36033-10-E</b>	36	18-75	0.10	1.03	3.3	10	33	89%

**Enable Polarity** : “-P” for positive logic PI Input Filter, “-N” for negative logic PI Input Filter.



Pad/Pin Connections	
Pad/Pin#	Function
1	-Vin
2	Enable
3	+Vin
4	+Vout
5	-Sense
6	Adjust
7	-Sense
8	-Vout

**Electrical Specifications**

Typical @ Ta=+25°C under nominal line voltage and full load conditions unless noted.

**Input**

Parameter	Notes and Conditions	Min.	Typ	Max.	Unit
Operating Input Voltage ranges	EST36 models	18	36	75	VDC
	EST48 models	36	48	75	VDC
Under-Voltage Lockout Turn-ON Threshold	EST36 models	17.5			VDC
	EST48 models	35			VDC
Under-Voltage Lockout Turn-OFF Threshold	EST36 models			17	VDC
	EST48 models			34	VDC
Input Current	See model selection guide, Standby mode ( <b>OFF, UVLO</b> ) 5mA				
High Input Level	Enable Function Input	3		5.5	VDC
Low Input Level		0		1.2	VDC
Input Filter	All models	Pi Filter			

**Output**

Parameter	Notes and Conditions	Min.	Typ	Max.	Unit
Output Voltage Accuracy	50% Load			±1.5	%
Line Regulation	Low line to High line			±0.3	%
Load Regulation	10% to 100% load			±0.5	%
Ripple & Noise (20MHz bandwidth)	Over Line, Load & Temp.		50	100	mV pk-pk
				30	mV RMS
Temperature Coefficient				±0.04	% /°C
Transient Recovery Time	25% load step change			400	µSec.
Transient Peck Deviation	25% load step change			2	%Vo
Start-Up Time			50	100	mSec.
Output Power Protection		100	120	140	%

**General Specifications**

Parameter	Notes and Conditions	Min.	Typ	Max.	Unit
Switching Frequency		220	260	300	KHz
Storage Temperature range	All models	-55		125	°C
Operating Case Temperature	All models	-40		100	°C
Isolation Voltage	All models, 1 Minute			2250	VDC
Isolation Resistance	All models, 500VDC	10			MΩ
Isolation Capacitance	All models			1500	pF
Humidity	All models			95	%
Calculated <b>MTBF</b>	BellCore TR-332 @ 50°C G.B.	TBC			Hours
Weight				18.0	g (oz.)
Efficiency	See model selection guide				
Dimensions	0.9" x 1.32" x 0.4" (22.9 x 33.5 x 10.0mm)				

**It is recommended to protect the input by fuses or other protection devices.**

The information and specifications contained in this data sheet are believed to be correct at time of publication. All specifications are subject to change without notice. No rights under any patent accompany the sale of any such products or information contained herein.

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