

# EC2EE

## 15 WATT WIDE INPUT DC-DC CONVERTERS



### Features

- 15W Isolated Output
- 2:1 Input Range
- Six-Sided Shield
- Remote ON/OFF Control
- Efficiency to 84%
- 200KHz Switching Frequency

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF.	CASE
				NO LOAD	FULL LOAD		
EC2EE01		5 VDC	3000 mA	20 mA	1700 mA	77	
EC2EE02		12 VDC	1250 mA	20 mA	1600 mA	78	
EC2EE03		15 VDC	1000 mA	20 mA	1600 mA	78	
EC2EE04	9-18 VDC	±12 VDC	±625 mA	35 mA	1520 mA	82	E
EC2EE05		±15 VDC	±500 mA	35 mA	1520 mA	82	
EC2EE06		5/±12 VDC	1500/±310 mA	30 mA	1600 mA	78	
EC2EE07		5/±15 VDC	1500/±250 mA	30 mA	1600 mA	78	
EC2EE08		+5/+12/-5 VDC	1500/310/500 mA	30 mA	1470 mA	78	
EC2EE11		5 VDC	3000 mA	25 mA	810 mA	77	
EC2EE12		12 VDC	1250 mA	25 mA	780 mA	80	
EC2EE13		15 VDC	1000 mA	25 mA	780 mA	80	
EC2EE14	18-36 VDC	±12 VDC	±625 mA	25 mA	750 mA	84	E
EC2EE15		±15 VDC	±500 mA	25 mA	750 mA	84	
EC2EE16		5/±12 VDC	1500/±310 mA	25 mA	780 mA	80	
EC2EE17		5/±15 VDC	1500/±250 mA	25 mA	780 mA	80	
EC2EE18		+5/+12/-5 VDC	1500/310/500 mA	25 mA	715 mA	80	
EC2EE21		5 VDC	3000 mA	10 mA	410 mA	77	
EC2EE22		12 VDC	1250 mA	10 mA	390 mA	80	
EC2EE23		15 VDC	1000 mA	10 mA	390 mA	80	
EC2EE24	36-72 VDC	±12 VDC	±625 mA	15 mA	380 mA	82	E
EC2EE25		±15 VDC	±500 mA	15 mA	380 mA	82	
EC2EE26		5/±12 VDC	1500/±310 mA	15 mA	380 mA	82	
EC2EE27		5/±15 VDC	1500/±250 mA	15 mA	380 mA	82	
EC2EE28		+5/+12/-5 VDC	1500/310/500 mA	15 mA	350 mA	82	

NOTE: 1. Nominal Input Voltage 12, 24 or 48 VDC

### Specifications

#### INPUT SPECIFICATIONS:

Input Voltage Range.....	12V.....	9-18V
	24V.....	18-36V
	48V.....	36-72V
Input Filter.....		PI Type

#### OUTPUT SPECIFICATIONS:

Voltage Accuracy.....		±1.0% max.
Single Output.....		±1.0% max.
Dual +Output.....		±3.0% max.
-Output.....		±2.0% max.
Triple, 5V.....		±3.0% max.
12V/15V.....		±1.0% max.
Voltage Balance (Dual).....		±1.0% max.
Transient Response:		
Single, 25% Step Load Change.....		<500µ sec.
Dual, FL-1/2L±1% Error Band.....		<500µ sec.
External Trim Adj. Range.....		±10%.
Ripple & Noise, 20MHz BW.....		10mV RMS, max. 75mV p-p max.
Temperature Coefficient.....		± 0.02%/°C
Short Circuit Protection.....		Continuous
Line Regulation <sup>1</sup> , Single/Dual.....		±0.2% max.
Triple.....		±1.0% max.
Load Regulation <sup>2</sup> , Single/Dual.....		±1.0% max.
Triple.....		±5.0% max.

#### GENERAL SPECIFICATIONS:

Efficiency.....	See Table
Isolation Voltage.....	500 VDC min.
Isolation Resistance.....	10 <sup>9</sup> ohms
Switching Frequency.....	200KHz, typ.
Operating Temperature Range.....	-25°C to + 71°C
Case Temperature.....	100°C max.
Cooling.....	Free-Air Convection
Storage Temperature Range.....	-55°C to + 105°C
EMI/RFI.....	Six-Sided Continuous Shield
Dimensions.....	2.56 x 3.0 x 0.83 inches (65 x 76.2 x 21.1 mm)
Case Material.....	Black Coated Copper with Non-Conductive Base

#### NOTE:

1. Measured From High Line to Low Line
2. Measured From Full Load to 1/4 Load

TRIPLE OUTPUT LOADING TABLE (1)

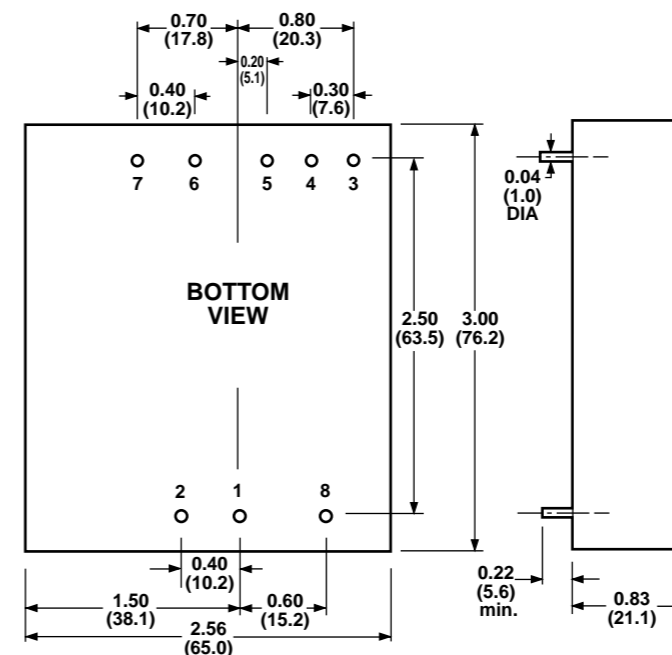
Output (Pin No.)	Voltage	Amperes	
		Min.(2)	Nom.
6	+5	0.25	1.5
3 & 5	+12 or -12	0.10	0.31
3 & 5	+15 or -15	0.10	0.25
3 & 5	+12 & -5	0.10/0.10	0.31/0.50

#### NOTE:

1. Maximum total power from all outputs is limited to 15 watts but no output should be allowed to exceed its maximum current.
2. Minimum current on each output is required to maintain specified regulation.

### CASE E

All Dimensions In Inches(mm)  
Tolerance .xx= ±.04, .xxx= ±.010



PIN CONNECTION			
Pin	Single Output	Dual Output	Triple Output
1.	+Input	+Input	+Input
2.	-Input	-Input	-Input
3.	No Pin	+Output	+Output
4.	Output Trim	Common	Common
5.	No Pin	-Output	-Output
6.	+Output	No Pin	+5V Output
7.	-Output	No Pin	No Pin
8.	Remote On/Off Control		

#### Remote On/Off Control

Logic Compatibility	CMOS or Open Collector TTL
EC-On	>+5.5VDC or Open Circuit
EC-Off	<1.8 VDC
Shutdown Idle Current	10 mA
Input Resistance	100K ohms (Ein 0 VDC to 9 VDC)
Control Common	Referenced to Input Minus

#### External Output Trimming

Output may optionally be externally trimmed (±10%) with a fixed resistor or an external trimpot as shown.

