

# EC6E

S E R I E S

## 25 - 30 WATT 4:1 INPUT RANGE DC-DC CONVERTERS



### Features

- 25-30W Isolated Output
- Efficiency to 84%
- 4 : 1 Input Range
- Fixed 200KHz Switching Frequency
- Six-Sided Shield Metal Case
- Remote On/Off Control
- Regulated Outputs

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF.	SIZE
				NO LOAD	FULL LOAD		
EC6E01	9-36 VDC	5 VDC	5000 mA	20 mA	1350 mA	77	2.56" x 3"
EC6E02		12 VDC	2500 mA	20 mA	1560 mA	80	
EC6E03		15 VDC	2000 mA	20 mA	1560 mA	80	
EC6E04		±12 VDC	±1250 mA	25 mA	1560 mA	80	
EC6E05		±15 VDC	±1000 mA	25 mA	1560 mA	80	
EC6E06		5/±12 VDC	3000/±625 mA	25 mA	1650 mA	76	
EC6E07		5/±15 VDC	3000/±500 mA	25 mA	1650 mA	76	
EC6E08		+5/+12/-5 VDC	3000/600/1000 mA	25 mA	1450 mA	78	
EC6E11	18-72 VDC	5 VDC	5000 mA	15 mA	670 mA	78	2.56" x 3"
EC6E12		12 VDC	2500 mA	15 mA	770 mA	81	
EC6E13		15 VDC	2000 mA	15 mA	770 mA	81	
EC6E14		±12 VDC	±1250 mA	20 mA	750 mA	84	
EC6E15		±15 VDC	±1000 mA	20 mA	750 mA	84	
EC6E16		5/±12 VDC	3000/±625 mA	20 mA	790 mA	79	
EC6E17		5/±15 VDC	3000/±500 mA	20 mA	780 mA	80	
EC6E18		+5/+12/-5 VDC	3000/600/1000 mA	20 mA	725 mA	78	

NOTE: 1. Nominal Input Voltage 24 or 48 VDC

### Specifications

#### INPUT SPECIFICATIONS:

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

#### OUTPUT SPECIFICATIONS:

Voltage Accuracy  
 Single Output.....±1.0% max.  
 Dual +Output.....±1.0% max.  
 -Output.....±3.0% max.  
 Triple, 5V.....±1.0% max.  
 12V/15V.....±5.0% max.  
 -5V.....±2.0% 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.

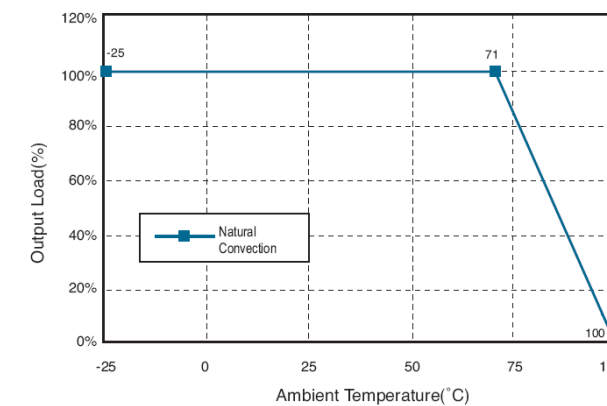
#### GENERAL SPECIFICATIONS:

Efficiency.....See Table  
 Isolation Voltage.....500 VDC min.  
 Isolation Resistance.....10<sup>9</sup>ohms  
 Switching Frequency.....200KHz, typ.  
 Operating Ambient Temperature Range .....-25°C to +71°C  
 De-rating, Above 71°C .....Linearly to Zero power at 100°C  
 Case Temperature<sup>3</sup>.....100°C max  
 Cooling .....Natural Convection  
 Storage Temperature Range.....-55°C to + 105°C  
 EMI/RFI.....Six-Sided Continuous Shield  
 Dimensions.....2.56 x 3.00 x 0.83 inches  
 (65.0 x 76.2 x 21.1 mm)  
 Case Material.....Black Coated Copper with  
 Non-Conductive Base  
 Weight.....175g

#### NOTE:

1. Measured From High Line to Low Line
2. Measured From Full Load to 1/4 Load
3. Maximum case temperature under any operating condition should not exceed 100°C.

### EC6E Series Derating Curve

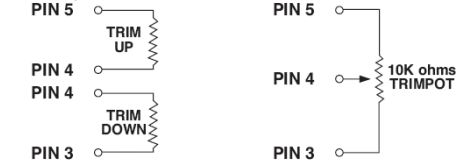


### Remote On/Off Control

Logic Compatibility	CMOS or Open Collector TTL
Ec-On	>+5.5 VDC or Open Circuit
Ec-Off	<1.8 VDC
Shutdown Idle Current	10mA
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.



### PIN CONNECTION

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

### TRIPLE OUTPUT LOADING TABLE (1)

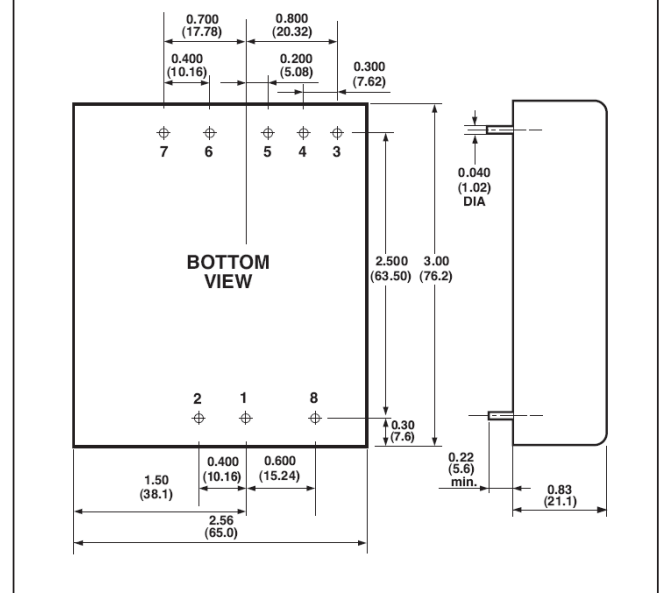
Output ( Pin No.)	Voltage	Amperes	
		Min.(2)	Nom.
6	+5	0.25	3.0
3 & 5	+12 & -12	0.10	0.625
3 & 5	+15 & -15	0.10	0.500
3 & 5	+12 & -5	0.10 / 0.10	0.60/1.0

#### NOTE:

1. Maximum total power from all outputs is limited to 30 watts but no output should exceed its maximum current.
2. Minimum current on each output is required to maintain specified regulation.

### CASE E

All Dimensions In Inches(mm)  
 Tolerance Inches: x.xx= ±0.04, x.xxx= ±0.010  
 Millimeters: x.x= ±1.0, x.xx= ±0.25



All Specifications Typical At Nominal Line, Full Load and 25°C Unless Otherwise Noted.