

4EE Series

25-30W DC-DC Converters

Features

- 25W Isolation output
- 4:1 Input Range
- Six-sided Shield
- Remote On/Off Control
- Efficiency To 82%
- 200KHz switching frequency

Model Number	Input Voltage	Output Voltage	Output Current	Input Current		% Efficiency	Case
				No Load	Full Load		
4EE-01	9-36 VDC	5 VDC	3000 mA	15 mA	810 mA	77	E
4EE-02		12 VDC	1250 mA	15 mA	780 mA	80	
4EE-03		15 VDC	1000 mA	15 mA	780 mA	80	
4EE-04		±12 VDC	±625mA	20 mA	780 mA	80	
4EE-05		±15 VDC	±500mA	20 mA	780 mA	80	
4EE-06		5/±12 VDC	1500/±310 mA	20 mA	780 mA	80	
4EE-07		5/±15 VDC	1500/±250 mA	20 mA	780 mA	80	
4EE-08		+5/+12/-5 VDC	1500/310/500 mA	20 mA	715 mA	80	
4EE-11	18-72 VDC	5 VDC	3000 mA	10 mA	410 mA	77	E
4EE-12		12 VDC	1250 mA	10 mA	390 mA	80	
4EE-13		15 VDC	1000 mA	10 mA	390 mA	80	
4EE-14		±12 VDC	±625mA	15 mA	380 mA	82	
4EE-15		±15 VDC	±500mA	15 mA	380 mA	82	
4EE-16		5/±12 VDC	1500/±310 mA	15 mA	380 mA	82	
4EE-17		5/±15 VDC	1500/±250 mA	15 mA	380 mA	82	
4EE-18		+5/+12/-5 VDC	1500/310/500 mA	15 mA	350 mA	82	

Note: Nominal Input Voltage 12, 24, 28 or 48VDC

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.....	+/- 3.0 % max.
Triple, 5V.....	+/- 2.0 % max.
12V/15V.....	+/- 3.0 % max.
Voltage Balance (Dual).....	+/- 1.0 % max.
External trim Adj. Range.....	+/- 10%
Ripple & Noise, 20 MHz BW.....	75 mV p-p max.
Temperature Coefficient.....	+/- 0.02 % /°C max.
Short Circuit Protection.....	Continuous
Line Regulation ¹ Single / Dual Output.....	+/- 0.2 % max.
Triple.....	+/- 1.0% max.
Load Regulation ² Single / Dual Output.....	+/- 1.0 % max.
Triple.....	+/- 5.0 % max.

General Specifications :

Efficiency.....	see table
Isolation Resistance.....	100Mohm
Switching Frequency.....	200 KHz, min.
Operating Temperature Range.....	-25° C ~ +71° C

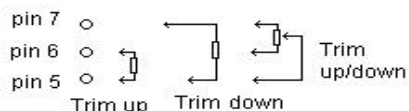
Outline Information and Pin-out

Pin Connection			
Pin	Single	Dual	Triple
1	+Input	+Input	+Input
2	-Input	-Input	-Input
3	No pin	+Output	+Output
4	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	>5.5 Vdc or open circuit
Ec-Off	<1.8 Vdc
Shutdown Idle current	10mA
Input resistance	100K ohms (Ein 0Vdc to 9Vdc)
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.



Case Temperature.....	100° C max.
Cooling.....	Free air convection
Storage Temperature Range.....	-55° C ~ +105° C
Isolation Voltage.....	500VDC min.
EMI/RFI.....	Six-sided continus shield
Dimensions.....	2.65" x3" x 0.83 "(65 x 76.2 x 21.1 mm)
Case Material.....	Black Coated Copper with Non-conducted base

Triple output loading table			
Ouput (pin no.)	Voltage (V)	Amperes	
		Min. (2)	Nom.
6	+5	0.25	1.5
3 & 5	+12 or -12	0.1	0.31
3 & 5	+15 or -15	0.1	0.25
3 & 5	+12 or -5	0.1/0.1	0.31/0.5

Note: 1. measured from high lin to low line

2. measured from full load to 1/4load

3. maximum total power from all outputs is limited to 25/30W but no output should be allowed to exceed its maximum current

4. minmum current on each output is required to maintain specified regulation

