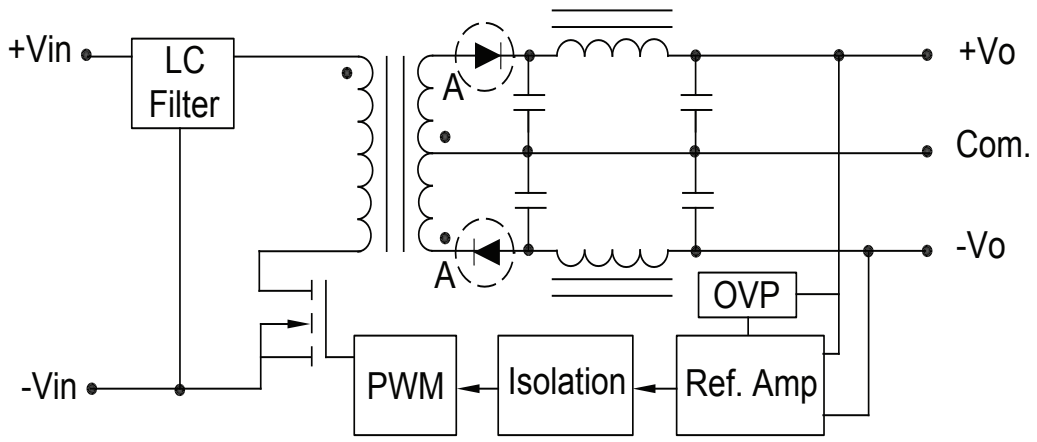
10 WATT EW DUAL

Features

- 2:1 Wide Input Range
- Efficiency up to 88%
- I/O Isolation 1500VDC
- Over Voltage Protection
- MTBF > 1,000,000 Hours
- RoHS Compliant

Selection Chart			
Model	Input Range	Output	
		VDC	mA
12D12.416EW	9.0 - 18.0	±12	±416
12D15.333EW	9.0 - 18.0	±15	±333
24D12.416EW	18.0 - 36.0	±12	±416
24D15.333EW	18.0 - 36.0	±15	±333
48D12.416EW	36.0 - 75.0	±12	±416
48D15.333EW	36.0 - 75.0	±15	±333



Block Diagram

Input Parameters				
Model		**12D12.416EW**	**12D15.333EW**	**Units**
Voltage Range	MIN TYP MAX	9.0 12.0 18.0		VDC
Input Current No Load Full Load	TYP TYP	40 957	40 968	mA
Reflected Ripple	TYP	60		mA
Under Voltage Shutdown	MAX	8.5		VDC
Reverse Polarity Input Currrent	MAX	0.5		A
Input Filter		Pi Filter		
Efficiency	TYP	87	86	%
Switching Frequency	TYP	400		kHz
Input Surge Voltage (1000 ms)	MIN MAX	-0.7 25		VDC
Recommended Fuse		2000 mA Slow - Blow Type		mA
Model		**24D12.416EW**	**24D15.333EW**	**Units**
Voltage Range	MIN TYP MAX	18.0 24.0 36.0		VDC
Input Current No Load Full Load	TYP TYP	20 473	20 478	mA
Reflected Ripple	TYP	40		mA
Under Voltage Shutdown	MAX	17		VDC
Reverse Polarity Input Currrent	MAX	0.5		A
Input Filter		Pi Filter		
Efficiency	TYP	88	87	%
Switching Frequency	TYP	400		kHz
Input Surge Voltage (1000 ms)	MIN MAX	-0.7 50		VDC
Recommended Fuse		1000 mA Slow - Blow Type		mA
Model		**48D12.416EW**	**48D15.333EW**	**Units**
Voltage Range	MIN TYP MAX	36.0 48.0 75.0		VDC
Input Current No Load Full Load	TYP TYP	10 236	10 243	mA
Reflected Ripple	TYP	40		mA
Under Voltage Shutdown	MAX	34		VDC
Reverse Polarity Input Currrent	MAX	0.5		A
Input Filter		Pi Filter		
Efficiency	TYP	88	87	%
Switching Frequency	TYP	400		kHz
Input Surge Voltage (1000 ms)	MIN MAX	-0.7 100		VDC
Recommended Fuse		500 mA Slow - Blow Type		mA

Output Parameters				
Models		**12D12.416EW 24D12.416EW 48D12.416EW**	**12D15.333EW 24D15.333EW 48D15.333EW**	**Units**
Output Voltage		±12	±15	VDC
Output Current	MIN MAX	±42 ±416	±33 ±333	mA
Output Voltage Accuracy	TYP MAX	±0.6 ±1.2		%
Load Regulation Io = 10% to 100%	TYP MAX	±0.5 ±1.2		%
Line Regulation Vin = Min. to Max.	TYP MAX	±0.3 ±1.0		%
Ripple & Noise (20MHz)	TYP MAX	50 85		mV P-P
Ripple & Noise (20MHz) Over Line, Load & Temp	MAX	100		mV P-P
Ripple & Noise (20MHz)	MAX	15		mV RMS
Transient Recovery Time, 25% Load Step Change	TYP MAX	250 500		µs
Transient Response Deviation, 25% Load Step Change	TYP MAX	±3 ±5		%
Temperature Coefficient	TYP MAX	±0.01 ±0.02		% / ºC
Short Circuit Protection		Continuous		

Notes:

(1) All parameters measured at Tc=+25ºC, resistive load, nominal input voltage, full rated output current unless otherwise noted.

(2) Transient recovery time is measured to within 1% error band for a step change in output load 75% to 100%

(3) When measuring output ripple & noise, an external 0.1µF ceramic capacitor is recommended to be placed from +Vout to -Vout.

(4) Specifications subject to change without notice

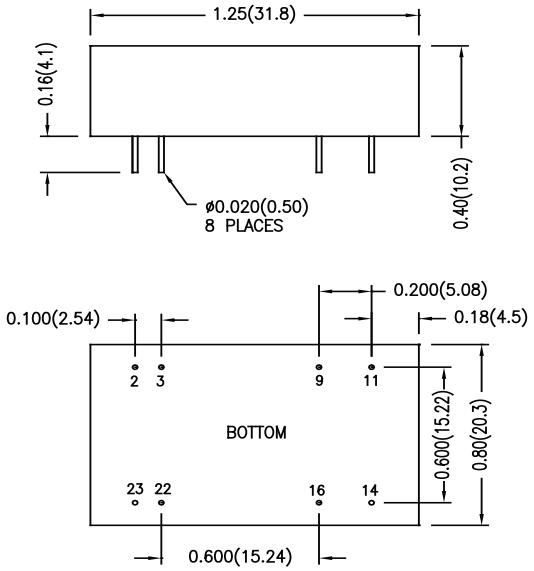
(5) Water Washability - Calex DC/DC converters are designed to withstand most solder/wash processes. Careful attention should be used when assessing the applicability in your specific manufacturing process. Converters are not hermetically sealed.

(6) RoHS Compliance means conformity to EU Directive 2002/95/EC of 27 January 2003, on the restriction of the use of certain hazardous substances in electrical and electronic equipment, lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyls, and polybrominated diphenyl ethers are not present in quantities exceeding the following maximum concentrations in any homogeneous material, except for applicable exemptions. 0.1% (by weight of homogeneous material) lead, mercury, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers, or 0.01% (by weight of homogeneous material) cadmium. The RoHS marking is as follows.

Pb
RoHS

General Specifications			
All Models			**Units**
Isolation			
Isolation Voltage, 60 seconds	MIN	1500	VDC
Isolation Resistance, 500VDC	MIN	1000	Mohms
Isolation Capacitance, 100kHz, 1V	TYP MAX	1000 1200	pF
Environmental			
Operating Temperature Case	MIN MAX	-40 +90	ºC
Storage Temperature	MIN MAX	-40 +125	ºC
Humidity	MAX	95	%
Cooling		Free-Air Convection	
General			
Case Size		1.25 x 0.80 x 0.40 inches 31.8 x 20.3 x 10.2 mm	
Case Material		Metal with Non-Conductive Baseplate	
Weight		17.3g	

Case Mechanical Dimensions
inches (mm)



Pin	Name
2	-Vin
3	-Vin
9	Common
11	-Vout
14	+Vout
16	Common
22	+Vin
23	+Vin

TOLERANCE: ALL DIMENSIONS ARE TYPICAL IN INCHES (mm) UNLESS OTHERWISE NOTED:	
X.X	±0.01 (0.25)
X.XX	±0.005 (0.13)
PINS	±0.002 (0.05)

Derating Curve