FEATURES:

- 15 Watt DIL Package
- 4:1 Wide Input Voltage Range
- High Efficiency Up To 90%
- Regulated Output Types
- No Minimum Load Required
- Over Power and Short Circuit Protection
- UL94V-0 Package Material
- 100% Burned In
- UL Recognized

ADAM TECH

DC-DC Converter

UC15 Series

15 Watt
1600Vdc Isolated
4:1 Input Voltage Range
Single & Dual Output
DIP16 Package

Specifications typical at TA=25°C nominal input voltage and rated output current unless otherwise specified

Part Number	Input Voltage Range	Input Current (mA TYP)		Output Voltage Range	Output Current	Efficiency	Maximum Capacitor Load
		No-Load	Full-Load				
	Vdc	mA (typ)	mA (typ)	Vdc	mA (typ)	% (typ)	μ F
UC15-24S12	9~36	10	702	12	1250	89	1000
UC15-24S24	9~36	10	702	24	625	89	360
UC15-24D15	9~36	10	702	±15	±500	89	±360

RoHS COMPLIANT

Part Number

$$\frac{UC}{A}\ \frac{15}{B}\ -\ \frac{XX}{C}\ \frac{X}{D}\ \frac{XX}{E}$$

A: Series
B: Output Power
C: Input Voltage
D: Single (S) / Dual Output (D)
E: Output Voltage

Input Specifications

Parameters	Conditions		Min	Typ	Max	Units
Input Voltage	24V models		9		36	Vdc
	48V models		18		75	
Input Surge Voltage (100 ms max.)	24V models		-0.7		50	Vdc
	48V models		-0.7		100	
Start-up Voltage	24V models				9	Vdc
	48V models				18	
Under Voltage Shutdown	24V models			8		Vdc
	48V models			15		
Start-up Time	Constant Resistive Load, Nominal Vin	Power-up		35		ms
Input Filter	All Models			Internal LC type		

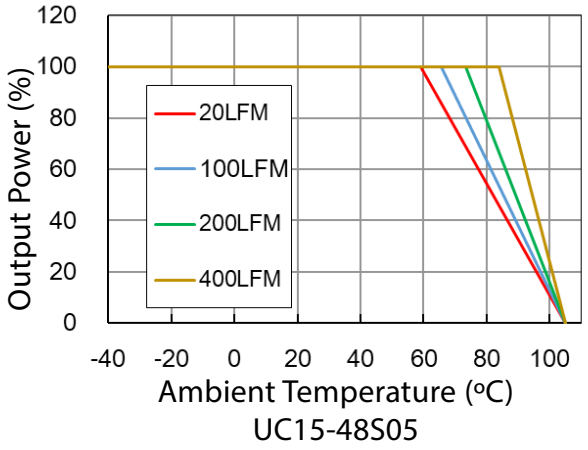
Output Specifications

Parameters	Conditions		Min	Typ	Max	Units
Voltage Tolerance	100% Load		-2		+2	%
Line Regulation	Vin (min) to Vin (max) @100% Load		-0.5		+0.5	%
Load Regulation	0% Load to 100% Load		-0.5		+0.5	%
Load Cross Regulation	Asymmetrical Load 25% / 100% Load	Dual Output	-5.0		+5.0	%
Ripple & Noise (BW=20MHz)	All models			60	100	mVp-p
Transient Response Setting Time	25% Load Step Change			350	500	us
Transient Response Deviation	25% Load Step Change		-5	±3	+5	%
Temperature Coefficient			-0.02		+0.02	%/°C
Output Power Protection	% of Io, Hiccup mode, Auto-recovery		120	155	190	%
Short Circuit Protection	Continuous [Hiccup Mode], Auto-Recovery					
Over Voltage Protection	5Vout			6.2		Vdc
	12Vout			15		
	15Vout			18		
	24Vout			30		

General Specifications

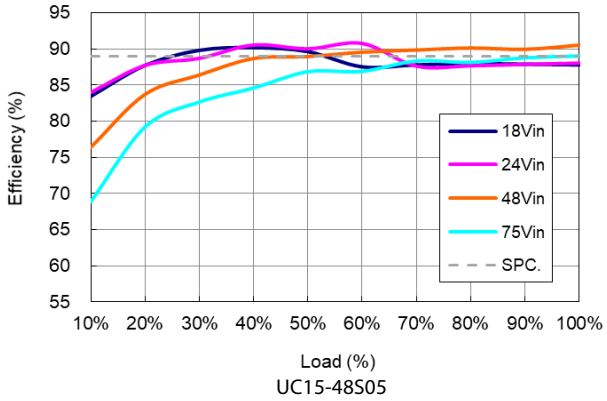
Parameters	Conditions		Min	Typ	Max	Units
Isolation Voltage	Input To Output (60 sec)		1600			Vdc
	Input (Output) To Case (60sec)		1000			Vdc
Isolation Resistance	500Vdc		1000			MΩ
Isolation Capacitance	100kHz, 1V				2200	pF
Switching Frequency	100% Load, Nominal Input	5V Output		270		KHz
		Other Output		390		
Operating Ambient Temperature (Power Derating See Derating Graph)	Nominal Vin, 100% Load	UC15-24S05, UC15-48S05 UC15-24S12, UC15-48S12 UC15-24S24, UC15-48S24 UC15-24D15, UC15-48D12	-40		+59.2	ºC
		UC15-24S15, UC15-48S15 UC15-24D12			+54.5	
		UC15-48D15			+63.8	
Thermal Impedance	20LFM			24.7		ºC/W
	100LFM			21.2		
	200LFM			17.1		
	400LFM			11.3		
Maximum Case Temperature					+105	ºC
Storage Temperature			-55		+125	ºC
Humidity	Non Condensing		5		95	%
Cooling	Natural Convection					
Case Material	Copper, Black Coating					
Potting Material	Silicone (UL94-V0)					
MTBF	MIL-HDBK-217F@25ºC (calculated)			$7.5X10^5$		Hours
Weight				11		g
Dimensions	24.0 x 14.0 x 9.8					mm

Temperature Derating Graph

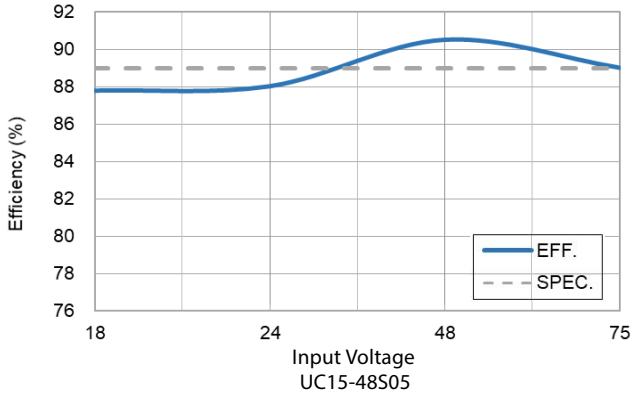


UC15-48S05

Characteristic Curve

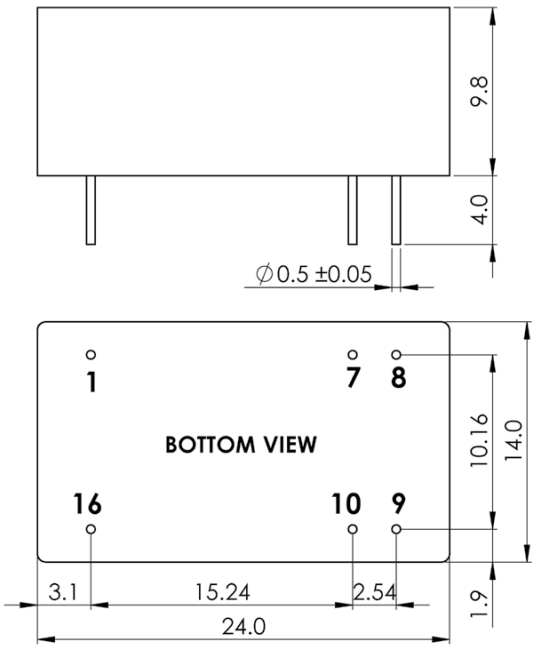


UC15-48S05



UC15-48S05

Dimensions



UNIT: mm
Tolerances are XX.X±0.5, XX.XX±0.25

PIN Assignment

PIN	Single	Dual	Diameter
1	-Vin	-Vin	0.5mm [0.02″]
7	NC	NC	0.5mm [0.02″]
8	NC	Com	0.5mm [0.02″]
9	+Vout	+Vout	0.5mm [0.02″]
10	-Vout	-Vout	0.5mm [0.02″]
16	+Vin	+Vin	0.5mm [0.02″]