

**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



**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 (mA (typ))	Efficiency % (typ)	Maximum Capacitor Load $\mu$ F
		No-Load	Full-Load	Vdc	mA (typ)			
	Vdc	mA (typ)	mA (typ)	Vdc	mA (typ)	% (typ)	$\mu$ 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	$\pm$ 15	$\pm$ 500	89	$\pm$ 360	



**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	

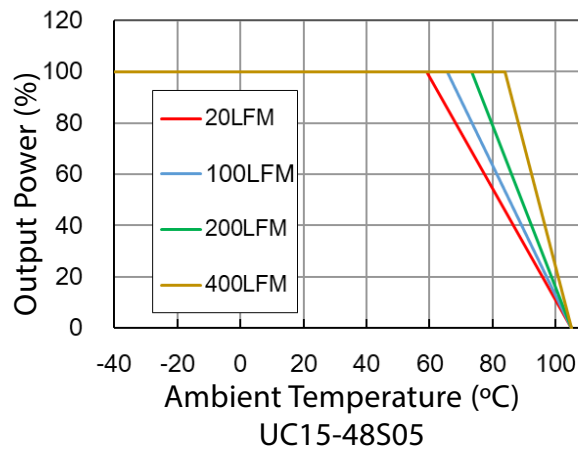
## Output Specifications

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		

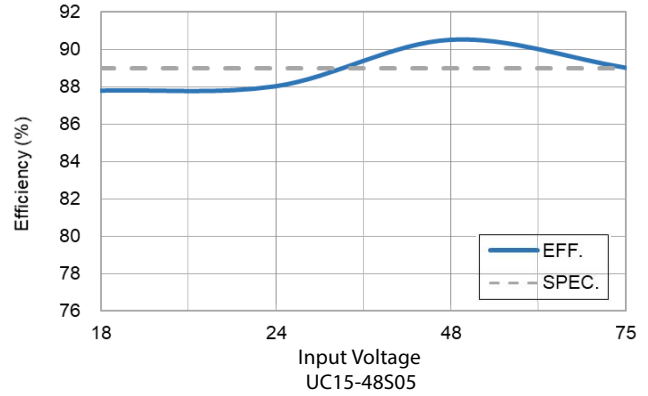
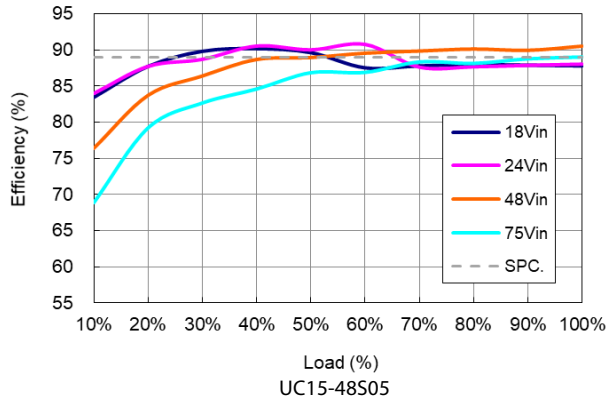
**General Specifications**

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	°C
		UC15-24S15, UC15-48S15 UC15-24D12			+54.5	
		UC15-48D15			+63.8	
Thermal Impedance	20LFM		24.7		°C/W	
	100LFM		21.2			
	200LFM		17.1			
	400LFM		11.3			
Maximum Case Temperature				+105	°C	
Storage Temperature		-55		+125	°C	
Humidity	Non Condensing	5		95	%	
Cooling	Natural Convection					
Case Material	Copper, Black Coating					
Potting Material	Silicone (UL94-V0)					
MTBF	MIL-HDBK-217F@25°C (calculated)		7.5X10 <sup>5</sup>		Hours	
Weight			11		g	
Dimensions	24.0 x 14.0 x 9.8				mm	

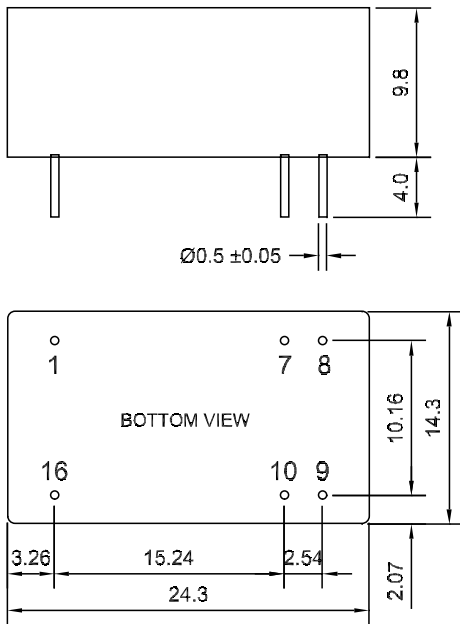
**Temperature Derating Graph**



**Characteristic Curve**



**Dimensions**



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

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"]