

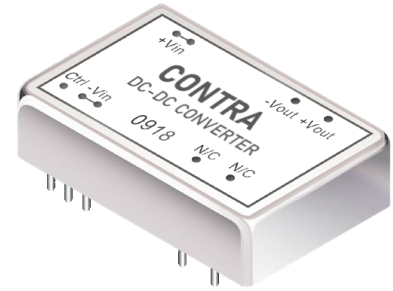
CYKB25SERIES DC-DC Converter 25Watt

1600Vdc Isolated 4:1 Input Voltage Range



FEATURES :

- 25W DIL Package
- 4:1 Wide Input Voltage Range
- High Efficiency Up To 92%
- Regulated Output Types
- No Minimum Load Required
- Over Power and Short Circuit Protection
- Operating Temperature: -40°C To +86°C(with derating)
- UL94V-0 Package Material
- 100% Burned In
- 3 Years Warranty



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

Selection Guide

Part Number	Input Voltage Range	Input Current		Output Voltage	Output Current	Efficiency	Maximum capacitor Load
		No-Load	Full-Load				
	Vdc	mA (typ)	mA (typ)	Vdc	mA (typ)	% (typ)	μF
CYKB25-24S05	9-36	7	1171	5	5000	89	8500
CYKB25-24S12	9-36	7	1171	12	2084	89	1500
CYKB25-24S15	9-36	7	1158	15	1667	90	1000
CYKB25-24S24	9-36	7	1158	24	1042	90	390
CYKB25-24D12	9-36	7	1171	±12	±1042	89	±820
CYKB25-24D15	9-36	7	1158	±15	±833	90	±560
CYKB25-48S05	18-75	4	572	5	5000	91	8500
CYKB25-48S12	18-75	4	579	12	2084	90	1500
CYKB25-48S15	18-75	4	572	15	1667	91	1000
CYKB25-48S24	18-75	4	566	24	1042	92	390
CYKB25-48D12	18-75	4	572	±12	±1042	91	±820
CYKB25-48D15	18-75	4	572	±15	±833	91	±560

Part Number

$\frac{\text{CYKB}}{\text{A}}$
 $\frac{25}{\text{B}}$
-
 $\frac{24}{\text{C}}$
 $\frac{\text{S}}{\text{D}}$
 $\frac{05}{\text{E}}$

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

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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			7.5		Vdc
	48V Models			16		
Start-up Time	Constant Resistive Load, Nominal Vin	Power-up		30		ms
		Remote ON/OFF		30		
Input Filter	All Models		Internal Pi type			
Remote ON/OFF (Ctrl PIN Refer To –Vin PIN)	Positive Logic	DC/DC ON	Open	or	3.5 Vdc - 12 Vdc	mA
		DC/DC OFF	Short	or	0 Vdc – 1.2 Vdc	
	Input Current Of Ctrl PIN		-0.5		0.5	
	Remote Off Input Current			3.5		

Output Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	100% Load	-2		+2	%
Line Regulation	Vin(min) to Vin(max) @100% Load	-0.2		+0.2	%
Load Regulation	0% Load to 100% Load	5V Output	-1	+1	%
		Other Outputs	-0.5	+0.5	
Load Cross Regulation	Asymmetrical Load 25% / 100% Load	Dual Output	-5.0	+5.0	%
Ripple & Noise (BW=20MHz)	15Vout & 24Vout			150	mVp-p
	Other Outputs			100	
Transient Response Setting Time	25% Load Step Change		300	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	150	180	%
Short Circuit Protection	Continuous [Hiccup Mode] ,Auto-Recovery				
Over Voltage Protection	5Vout		6.2		Vdc
	12Vout		15		
	15Vout		18		
	24Vout		30		

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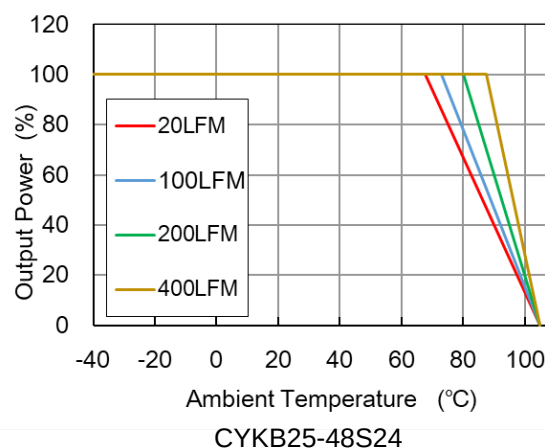
1600Vdc Isolated 4:1 Input Voltage Range



General Specifications

Parameters	Conditions	Min	Typ	Max	Units
Isolation Voltage	Input To Output (60sec)	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	250		KHz
		Other Output	330		
Operating Ambient Temperature (Power Derating See Derating Graph)	Nominal Vin, 100% Load	CYKB25-48S24	-40	67.6	°C
		CYKB25-48S05, CYKB25-48S15, CYKB25-48D12,, CYKB25-48D15		62.5	
		CYKB25-24S15, CYKB25-24S24, CYKB25-24D15, CYKB25-48S12		57.2	
		CYKB25-24S05, CYKB25-24D12, CYKB25-24S12		51.8	
Thermal Impedance	20LFM		17.2	°C/W	
	100LFM		13.9		
	200LFM		10.3		
	400LFM		6.8		
Maximum Case Temperature				105	°C
Storage Temperature		-55		125	°C
Humidity	Non Condensing	5		95	%
Cooling	Natural Convection				
Case Material	Copper				
Potting Material	Silicone (UL94-V0)				
MTBF	MIL-HDBK-217F@25°C (calculated)		4.61X10 ⁵		Hours
Weight			18		g
Dimensions	31.6 x 20.1 x 10.0				mm

Temperature Derating Graph

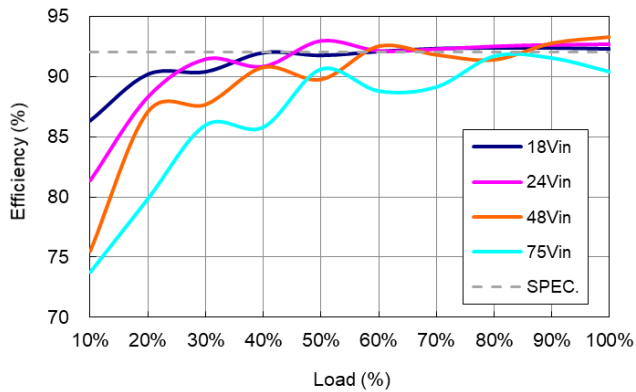


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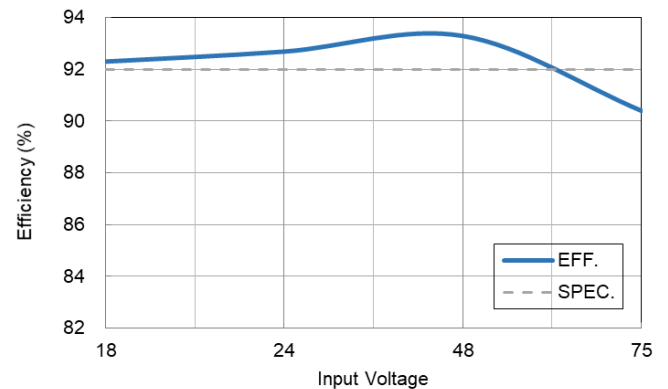
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Characteristic Curve

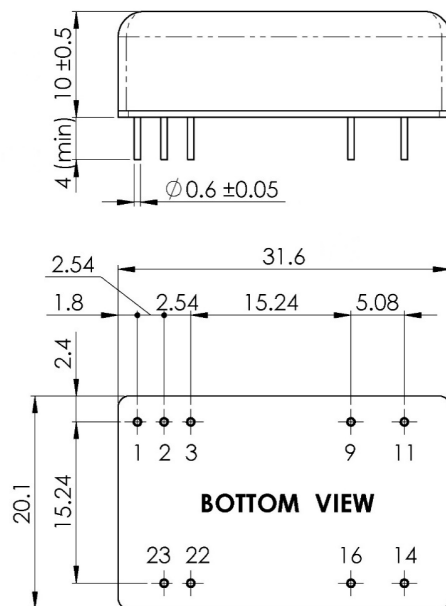


CYKB25-48S24



CYKB25-48S24

Dimensions



Unit : mm
Tolerance : XX.X ± 0.5 , XX.XX ± 0.25

PIN Assignment

Pin	Single	Dual	Diameter
1	Ctrl	Ctrl	0.6mm[0.024"]
2	-Vin	-Vin	0.6mm[0.024"]
3	-Vin	-Vin	0.6mm[0.024"]
9	NC	Com	0.6mm[0.024"]
11	NC	-Vout	0.6mm[0.024"]
14	+Vout	+Vout	0.6mm[0.024"]
16	-Vout	Com	0.6mm[0.024"]
22	+Vin	+Vin	0.6mm[0.024"]
23	+Vin	+Vin	0.6mm[0.024"]