



# JA SERIES SINGLE AND DUAL OUTPUT 3 WATTS ISOLATED DC/DC CONVERTERS

- ◆ 4.5V ~ 75V , 2:1 & 4:1 INPUT RANGE
- ◆ REGULATED OUTPUT
- ◆ 1500Vdc INPUT / OUTPUT ISOLATION
- ◆ HIGH EFFICIENCY( UP TO 84% )
- ◆ SHORT CIRCUIT PROTECTION (continuous)
- ◆ OVER VOLTAGE PROTECTION (clamp)
- ◆ 24PIN DIP WITH INDUSTRY STANDARD PACKAGE AND PINOUT



ELECTRICAL SPECIFICATIONS :  
At Nominal Input , Full Load and 25°C

### MODEL SELECTION CHART :

Model Number	Models (Input Voltage)	Output Voltage	Output Current	Efficiency
				@Max.Load
	Vdc	Vdc	mA	%(Typ.)
JA03-05S3V3	05 (4.5~9)	3.3	900	67
JA03-05S05V		5	600	70
JA03-05S12V		12	250	71
JA03-05S15V		15	200	71
JA03-05D05V		±5	±300	72
JA03-05D12V		±12	±125	74
JA03-05D15V		±15	±100	74
JA03-12S3V3		12 (9~18)	3.3	900
JA03-12S05V	5		600	76
JA03-12S12V	12		250	78
JA03-12S15V	15		200	78
JA03-12D05V	±5		±300	76
JA03-12D12V	±12		±125	77
JA03-12D15V	±15		±100	77
JA03-24S3V3	24 (18~36)		3.3	900
JA03-24S05V		5	600	78
JA03-24S12V		12	250	81
JA03-24S15V		15	200	81
JA03-24D05V		±5	±300	82
JA03-24D12V		±12	±125	84
JA03-24D15V		±15	±100	84
JA03-48S3V3		48 (36~75)	3.3	900
JA03-48S05V	5		600	78
JA03-48S12V	12		250	81
JA03-48S15V	15		200	81
JA03-48D05V	±5		±300	78
JA03-48D12V	±12		±125	80
JA03-48D15V	±15		±100	80
JA03-412S3V3	412 (9~36)		3.3	900
JA03-412S05V		5	600	74
JA03-412S12V		12	250	76
JA03-412S15V		15	200	76
JA03-412D05V		±5	±300	74
JA03-412D12V		±12	±125	76
JA03-412D15V		±15	±100	79

### ABSOLUTE MAXIMUM INPUT VOLTAGE :

- 05 Models : 16V
- 12 Models : 25V
- 24 Models : 50V
- 48 Models : 100V
- 412 Models : 50V
- 424 Models : 100V

### GENERAL SPECIFICATIONS :

- Switching Frequency : 150KHz Typical
- Efficiency : See Table
- Isolation Voltage :  
Input-to-Output : 1500Vdc
- Isolation Resistance : ≥1000Mohm(500VDC)

### ENVIRONMENTAL SPECIFICATIONS :

- Operating Temperature Range(Ambient) :  
-40°C to +75°C (with derating)
- Maximum Case Temperature : +95°C
- Storage Temperature Range : -55°C to +115°C
- Cooling : Free - air Convection
- Temperature Coefficient : ±0.05% / °C max.
- Humidity : 95%

### PHYSICAL SPECIFICATIONS :

- Case Material : Nickel-Coated black plastic
- Pin Material : Brass , Solder Coated
- Potting Material : Epoxy  
(Flammability to UL94V-0)
- Dimension : 1.25\*0.8\*0.43 inches  
(31.8\*20.3\*11.0 mm)
- Weigh : 12.5g

### INPUT SPECIFICATIONS :

- Input Voltage Range : See Table
- Input Filter : Pi Type

### OUTPUT SPECIFICATIONS :

- Output Voltage & Current : See Table
- Output Voltage Accuracy : ±2 %
- Ripple & Noise(20MHz BW) :  
5V, 3.3V : 80mVp-p max.  
Others : 1% P-P max.
- Line Regulation : ±1 % max.
- Load Regulation F.L→1/4F.L :  
Single Output : ±0.5 % max.  
Dual Output : ±2.0 % max.
- Short Circuit Protection :  
Continuous(auto-recovery)
- Over Load Protection : ≥110% of full Load
- Transient Response Recovery Time  
(50% Load Step Change) : 300µ s max.

### RECOMMENDED INPUT FUSE (SLOW BLOW) :

- 05 Models : 2A/250V
- 12 Models : 1A/250V
- 24 Models : 0.5A/250V
- 48 Models : 0.2A/250V
- 412 Models : 0.5A/250V
- 424 Models : 0.2A/250V



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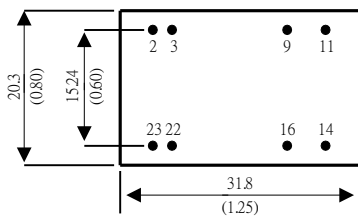
## MODEL SELECTION CHART :

Model Number	Input Voltage	Output Voltage	Output Current	Efficiency
	Vdc	Vdc	mA	@Max.Load
				%(Typ.)
JA03-424S3V3	424 (18~75)	3.3	900	71
JA03-424S05V		5	600	76
JA03-424S12V		12	250	77
JA03-424S15V		15	200	77
JA03-424D05V		±5	±300	76
JA03-424D12V		±12	±125	76
JA03-424D15V		±15	±100	81

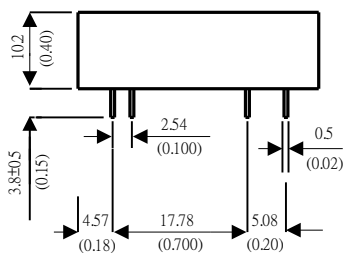
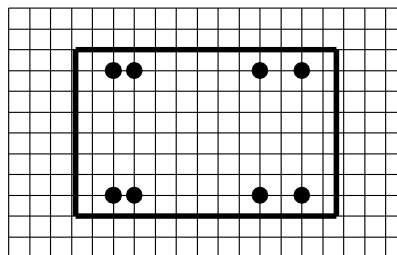
## MECHANICAL SPECIFICATIONS

### Mechanical Specifications

Bottom View



Recommended Pin Patterns  
Bottom View (2.54mm / 0.1inch grids)



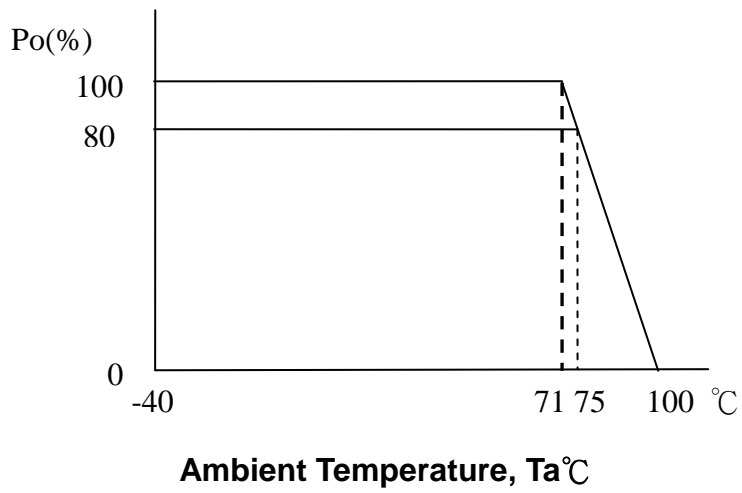
### Pin Connections

Pin	Single	Dual
22 & 23	+Vin	+Vin
2 & 3	- Vin	- Vin
9	NC	Common
11	NC	-Vout
14	+Vout	+Vout
16	- Vout	Common

NC : No Connections

Tolerance	Millimeters	Inches
	X ±0.25	.XX ±0.01
	XX ±0.25	.XXX ±0.01
Pin	±0.05	±0.002

## Power Derating Curve



### NOTE:

- (1) All specifications are typical at  $T_a=25^\circ\text{C}$ , nominal input voltage, resistive load and rated output current unless otherwise noted.
- (2) Specifications subject to change without notice.