JSE08 series

8W

DC-DC converters

The JSE08 series is housed in a DIP24 metal case. Featuring a 4:1 input voltage range of 9 to 36VDC or 18 to 75VDC with both single and dual outputs, singles have 3.3, 5, 12 or 15VDC with duals having ±5, ±12 or ±15VDC. Single output models are adjustable +/-10% with a trim resistor.

The JSE08 provides 1.6kVDC isolation between input and output. Remote on/off is standard. Operating temperature range is from -40°C to +85°C, with full power to +60°C.

Features

- Regulated single & dual outputs
- 2:1 input range
- Single outputs 3.3 to 24VDC
- Dual outputs ±12 & ±15VDC
- DIP16 metal case
- 1.5kVDC isolation
- Remote On/Off
- -40°C to +105°C operating temperature
- Full power to +70°C
- 3 year warranty

Applications

Autonomous equipment

Industrial

Technology

Instrumentation

Robotics

Dimensions

23.8 x 13.7 x 8.0mm (0.94” x 0.54” x 0.31”)

More resources

Click the link or scan the code

xppower.com

Models & ratings

Model number	Input voltage	Output voltage	Output current	Efficiency	Input current[1]		Maximum capacitive load[2]
					No load	Full load	
JSE0812S3V3	9-18VDC	3.3VDC	1600mA	78%	10mA	565mA	680µF
JSE0812S05		5VDC	1600mA	81%		825mA	680µF
JSE0812S12		12VDC	665mA	84%		790mA	330µF
JSE0812S15		15VDC	535mA	84%		795mA	330µF
JSE0812S24		24VDC	335mA	85%		790mA	150µF
JSE0812D12		±12VDC	±335mA	85%		790mA	±150µF
JSE0812D15		±15VDC	±265mA	84%		790mA	±150µF

Continued on page 2

Notes:

1. Input currents measured at nominal input voltage.
2. Maximum capacitive load is per output.

JSE08 series

Models & ratings

Model number	Input voltage	Output voltage	Output current	Efficiency	Input current[1]		Maximum capacitive load[2]
					No load	Full load	
JSE0824S3V3	18-36VDC	3.3VDC	1600mA	78%	10mA	280mA	680µF
JSE0824S05		5VDC	1600mA	82%		405mA	680µF
JSE0824S12		12VDC	665mA	85%		390mA	330µF
JSE0824S15		15VDC	535mA	85%		395mA	330µF
JSE0824S24		24VDC	335mA	86%		390mA	150µF
JSE0824D12		±12VDC	±335mA	85%		395mA	±150µF
JSE0824D15		±15VDC	±265mA	86%		385mA	±150µF
JSE0848S3V3	36-75VDC	3.3VDC	1600mA	78%	8mA	140mA	680µF
JSE0848S05		5VDC	1600mA	81%		205mA	680µF
JSE0848S12		12VDC	665mA	85%		195mA	330µF
JSE0848S15		15VDC	535mA	85%		195mA	330µF
JSE0848S24		24VDC	335mA	86%		195mA	150µF
JSE0848D12		±12VDC	±335mA	86%		195mA	±150µF
JSE0848D15		±15VDC	±265mA	86%		195mA	±150µF

Notes:

1. Input currents measured at nominal input voltage.
2. Maximum capacitive load is per output.

Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Input voltage range	9		18	VDC	12V nominal
	18		36		24V nominal
	36		75		48V nominal
Input filter	Internal PI type				
Undervoltage lockout		>9 / >8		V	On / Off (12V models)
		>18 / <16			24V models
		>36 / <34			48V models
Input surge		25		VDC	12V models (for 1s)
		50			24V models (for 1s)
		100			48V models (for 1s)

Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Output voltage	3.3		30	VDC	See models and ratings table
Initial set accuracy			±2.0	%	At full load
Output voltage balance		±1.0	±2.0	%	For dual output with balanced laods
Minimum load				A	No minimum load required
Line regulation		±0.2	±0.8	%	From minimum to maximum input at full load
Load regulation		±0.5	±1.0	%	From 0 to full load
Cross regulation			±5.0	%	On dual output models when one load is varied between 25% and 100% and other is fixed at 100%
Transient response		3	5	% deviation	Recovery within 1% in less than 250µs for a 25% load change.
Ripple & noise			55	mV pk-pk	20MHz bandwidth. Measured using 0.47µF ceramic capacitor.
Overload protection			150	%	
Short circuit protection					Continuous trip & restart (hiccup mode), with auto recovery
Maximum capacitive load					See models and ratings table
Temperature coefficient			0.02	%/°C	

JSE08 series

General

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Efficiency		85		%	See models and ratings table
Isolation: input to output	1500/1800			VDC	60s/1s Functional
Isolation resistance	10^9			Ω	At 500 VDC
Isolation capacitance		500		pF	
Switching frequency		370		kHz	
Power density			3.1 (50.8)	W/cm³ (W/in³)	
Mean time between failure		1		Mhrs	MIL-HDBK-217F, +25°C GB
Weight		6.1 (0.013)		g (lb)	
Pin material	Tinned Copper				
Lead free solder process	260°C max lead temperature 1.5mm from case for 10s				
Case flammability	UL 94V-0 Rated				

Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Operating temperature	-40		+105	°C	See derating curve
Storage temperature	-50		+125	°C	
Case temperature			+105	°C	
Humidity			95	%RH	Non-condensing
Cooling	Natural convection				

Safety approvals

Safety agency	Standard	Notes & conditions
UL	UL/cUL60950-1, UL/cUL62368-1	Information technology
CE	Meets all applicable directives	
UKCA	Meets all applicable legislation	

Emissions - EMC

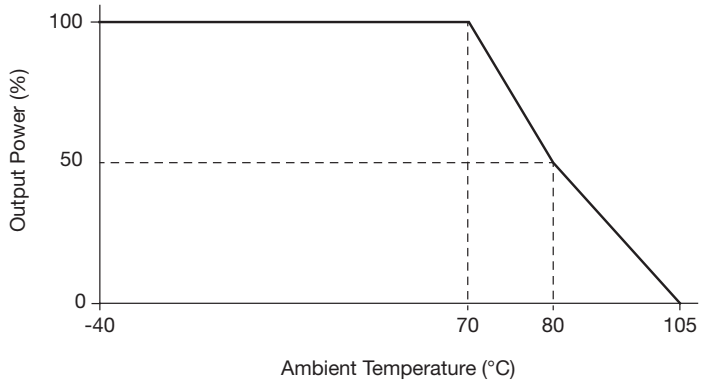
Phenomenon	Standard	Test level	Notes & conditions
Conducted	EN55032	Class A	No filter required

Immunity - EMC

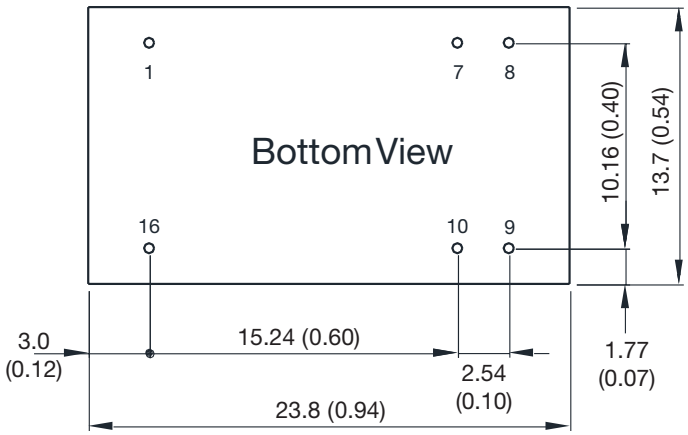
Phenomenon	Standard	Test level	Criteria	Notes & conditions
ESD immunity	EN61000-4-2	±8 kV air discharge, ±6 kV contact	A	
Radiated immunity	EN61000-4-3	10 V/m	A	
EFT/Burst	EN61000-4-4	±2 kV	A	With external capacitor, suggested part is CHEMI-CON KY 330µF/100V
Surge	EN61000-4-5	±1 kV	A	With external capacitor, suggested part is CHEMI-CON KY 330µF/100V
Conducted immunity	EN61000-4-6	10 V rms	A	

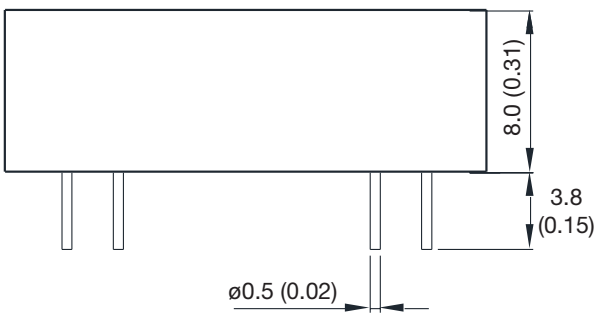
Application notes

Derating curve



Mechanical details





Pin connections		
Pin	**Single**	**Dual**
1	-Vin	-Vin
7	No Connection	No Connection
8	No Connection	Common
9	+Vout	+Vout
10	-Vout	-Vout
16	+Vin	+Vin

Notes:

1. All dimensions: mm (inches)
2. Weight: 6.1g (0.013lb) approx.
3. Tolerance: X.X±0.25 (X.XX±0.01), X.XX±0.13 (X.XXX±0.005)
4. Pin Tolerance: ±0.05 (±0.002)