

DESCRIPTION

The series of DC-DC switching power supplies in a package of 25.4x25.4x10 mm are capable of delivering 30 watts. They are designed for industry control application, stand by power application, telecom/datacom application, save space solution.

FEATURES

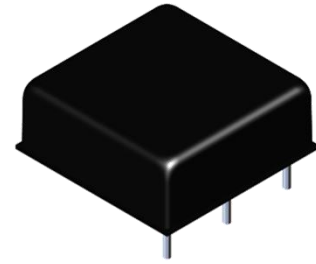
- 4:1 Wide input range voltage
- 30W power in compact size 1x1" package
- -40°C to +100°C operating temperature
- No minimum load required
- Continuous short circuit protection
- EMI class A without external circuit

WATTAGE

Wattage: 30W

DIMENSION

Dimension: 25.4 (L) x 25.4(W) x 10.0(H)mm



SAFETY STANDARD APPROVAL

Meet EN62368-1

ENVIRONMENTAL SPECIFICATION

Operating temperature: -40°C to +100°C

Storage temperature: -55°C to +125°C

SELECTION GUIDE

Part number	Input voltage	Output voltage	Output current @ full load	Input current @ no load	Efficiency ⁽¹⁾ (typ.)	Capacitive load ⁽²⁾ (max.)
D30-DA4-AT	9-36 VDC Nom. 24 VDC	3.3 VDC	7000 mA	10mA	88%	10000µF
D30-DA4-AP		5 VDC	6000 mA		89%	7200µF
D30-DA4-AH		12 VDC	2500 mA		89%	1200µF
D30-DA4-AG		15 VDC	2000 mA		89%	1000µF
D30-DA4-AA		24 VDC	1250 mA		90%	380µF
D30-2DA4-AH		±12 VDC	±1250 mA		89%	±750µF
D30-2DA4-AG		±15 VDC	±1000 mA		91%	±500µF
D30-DA4-FT		18-75 VDC Nom. 48 VDC	3.3 VDC		7000 mA	10mA
D30-DA4-FP	5 VDC		6000 mA	90%	7200µF	
D30-DA4-FH	12 VDC		2500 mA	90%	1200µF	
D30-DA4-FG	15 VDC		2000 mA	91%	1000µF	
D30-DA4-FA	24 VDC		1250 mA	92%	380µF	
D30-2DA4-FH	±12 VDC		±1250 mA	91%	±750µF	
D30-2DA4-FG	±15 VDC		±1000 mA	92%	±500µF	

1. The efficiency is test by nominal input and max. full load @25°C.
2. The capacitive load is test by minimum input and constant resistive load.
3. Special input and output voltage combinations available by request, please check with our sales.

SPECIFICATION

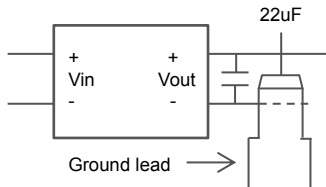
	Parameter	Conditions	Min.	Typ.	Max.	Unit
Input	Input filter		Pi type			
	Voltage range		4 : 1			
	Start-up time	Constant resistive load, nominal input		30		mS
	Start-up voltage (0%-100% load)	24Vin			9	VDC
		48Vin			18	VDC
	Under voltage lockout (0%-100% load)	24Vin			7.5	VDC
		48Vin			16	VDC
Input surge voltage (0.1s Max.)	24Vin				50	VDC
	48Vin				100	VDC
Output	Voltage accuracy				±1	%
	Line voltage regulation (LL-HL at Full load)	Single			±0.2	%
		Dual			±0.5	%
	Load voltage regulation (0% load to 100% load)	Single			±0.2	%
		Dual			±1.0	%
	Cross regulation	Asymmetrical load 25%/100%			±5	%
	Minimum load				0	%
	Ripple & noise ⁽¹⁾				75	mVp-p
	Operating frequency	100% load at all input range			250	KHz
Voltage adjustability	0%~100% load at Vin range Pout ≤ max rated power	-10		+10	%	
Transient response recovery time	25% load step change (75%-100% load)			250	µs	
Environment	Operating temperature	With de-rating	-40		100	°C
	Storage temperature		-55		125	°C
	Max. case temperature				105	°C

This content is subject to change, please refer to specification for more detail.
FSP reserve the right to change the content without prior notice.

	Parameter	Conditions	Min.	Typ.	Max.	Unit	
	MTBF (MIL-HDBK-217F)	25°C	TBD			KHrs	
	Vibration		MIL-STD-202G				
Function	Short Circuit Protection		Continuous, automatic recovery				
	Isolation test voltage	1 min., Input to output	1600			VDC	
	Isolation capacitance	500VDC			1200	pF	
	Isolation resistance		1			GΩ	
	Over load protection	24V input			170		%
		48V input			190		%
	Over temperature protection			115		°C	
	Safety		EN 62368-1				
	Remote on/off	DC-DC on		Open or 3.5~15VDC			
DC-DC off			Short or 0~1.2VDC				
Remote on/off input current	Remote off		2mA				
Physical	Dimension		25.4x25.4x10.0 mm				
	Weight			17		g	
	Cooling method		Free air convection				
	Case material		Nickel plated metal with FR-4 base				
	Potting material		Silicone				
EMC	EMI ⁽²⁾	EN55032	Class A/B				
	ESD	EN61000-4-2, Air±8KV; Contact±6KV	Criteria A				
	Radiated immunity ⁽³⁾	EN61000-4-3	Criteria A				
	Fast transient ⁽³⁾	EN61000-4-4, ±2KV	Criteria A				
	Surge ⁽³⁾	EN61000-4-5, ±2KV	Criteria A				
	Conducted immunity ⁽³⁾	EN61000-4-6	Criteria A				
	Magnetic field immunity	EN61000-4-8	Criteria A				

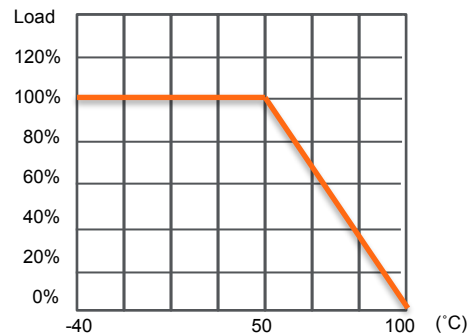
1. Ripple& noise: 20MHz BW at Vin range 0%~100% load (contact MLCC 22uF).
2. EMI class A without external circuit, and class B suggestion circuit, please check with our sales.
3. Test with E-CAP 220uF/100V at input terminal.
4. The product information and specifications are subject to change without prior notice.

RIPPLE & NOISE

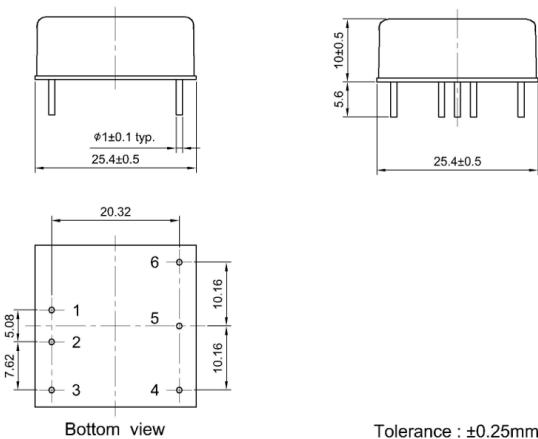


DERATING CURVE

Ambient temperature nature convection (Nominal Vin)

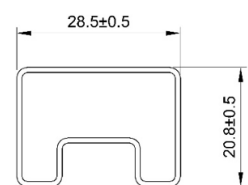


MECHANICAL SPECIFICATION



PACKAGE

Pin	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
3	Remote ON/OFF	Remote ON/OFF
4	-Vout	-Vout
5	Trim	Com.
6	+Vout	+Vout



UNIT:mm
1 Tube = 8 pcs
Length:260±2mm