SK01S/D Sries

1W DC/DC CONVERTER, SMD-Package

FEATURES

- Ultra compact SMD Packagef
- Wide 2:1 Input Range
- Fully regulated Outputs
- Low Ripple and Noise
- Operating Temp. Range -40°C to +85°C
- I/O-isolation Voltage 1500VDC
- Continuous Short-circuit Protection
- Remote On/Off Control
- Qualified for Lead-free Reflow Process
- UL/cUL/IEC/EN 60950-1 Safety Approval (pending)
- 3 Years Product Warranty

The SK01S/D series is a family of compact 1W dc/dc-converters with wide 2:1 input voltage ranges and tightly regulated output voltages. They work with high efficiency over the full load range and come with a remote On/Off control input.

High efficiency to 82% allows operating temperatures up to +75°C without power derating. The very small footprint of these converters make them an ideal solution for many space critical applications in communication equipment, instrumentation and many other battery operated applications.

Model List

Model Number	Input Voltage (Range)	Output Voltage	Output Current	Input Current		Max. capacitive Load	Reflected Ripple current	Efficiency (typ.)
			Max.	@Max. Load	@No Load			@Max. Load
	VDC	VDC	mA	mA(typ.)	mA(typ.)	μF	mA (typ.)	%
SK01S0505A	5 (4.5 ~ 9)	5	200	256	40	1680	80	78
SK01S0512A		12	83	252		820		79
SK01S0515A		15	67	248		680		81
SK01D0512A		±12	±42	255		470#		79
SK01D0515A		±15	±33	248		330#		80
SK01S1205A	12 (9 ~ 18)	5	200	105	20	1680	40	79
SK01S1212A		12	83	105		820		79
SK01S1215A		15	67	102		680		82
SK01D1212A		±12	±42	104		470#		81
SK01D1215A		±15	±33	103		330#		80
SK01S2405A	24 (18 ~ 36)	5	200	53	10	1680	30	79
SK01S2412A		12	83	51		820		82
SK01S2415A		15	67	51		680		82
SK01D2412A		±12	±42	51		470#		82
SK01D2415A		±15	±33	50		330#		82
SK01S4805A	48 (36 ~ 75)	5	200	26	7	1680	20	79
SK01S4812A		12	83	26		820		80
SK01S4815A		15	67	26		680		80
SK01D4812A		±12	±42	26		470#		81
SK01D4815A		±15	±33	25		330#		81

For each output

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http://www.deltaww.com/dcdc

Input Specifications

Parameter	Model	Min.	Typ.	Max.	Unit
Input Surge Voltage (1 sec. max.)	5V Input Models	-0.7	---	15	VDC
	12V Input Models	-0.7	---	25	
	24V Input Models	-0.7	---	50	
	48V Input Models	-0.7	---	100	
Start-Up Threshold Voltage	5V Input Models	---	---	4.5	
	12V Input Models	---	---	9	
	24V Input Models	---	---	18	
	48V Input Models	---	---	36	
Internal Filter Type	All Models	Capacitor			

Output Specifications

Parameter	Conditions		Min.	Typ.	Max.	Unit
Output Voltage Setting Accuracy	At 50% Load and Nominal Vin		---	---	±1.0	%Vnom.
Output Voltage Balance	Dual Output, Balanced Loads		---	---	±1.0	%
Line Regulation	Vin=Min. to Max.		---	---	±0.2	%
Load Regulation	Min. Load to Full Load	Single Output	---	---	±1.0	%
		Dual Output	---	---	±1.0	%
	Io=10% to 90%	Single Output	---	---	±0.5	%
		Dual Output	---	---	±0.8	%
Min.Load	No minimum Load Requirement					
Ripple & Noise	0-20 MHz Bandwidth		---	---	75	mV_{P-P}
Transient Recovery Time	25% Load Step Change		---	250	---	µsec
Temperature Coefficient			---	---	±0.02	%/℃
Short Circuit Protection	Continuous					

General Specifications

Parameter	Conditions	Min.	Typ.	Max.	Unit
I/O Isolation Voltage (rated)	60 Seconds	1500	---	---	VDC
I/O Isolation Resistance	500 VDC	1000	---	---	MΩ
I/O Isolation Capacitance	100KHz, 1V	---	---	50	pF
Switching Frequency		---	220	---	KHz
MTBF(calculated)	MIL-HDBK-217F@25℃, Ground Benign	2,800,000	---	---	Hours
Moisture Sensitivity Level (MSL)	IPC/JEDEC J-STD-020D.1	Level 2			
Safety Approvals(pending)	CSA 60950-1 recognition,IEC/EN 60950-1(CB-scheme)				

Input Fuse (recommended)

5V Input Models	12V Input Models	24V Input Models	48V Input Models
500mA Slow-Blow Type	250mA Slow-Blow Type	120mA Slow-Blow Type	60mA Slow-Blow Type

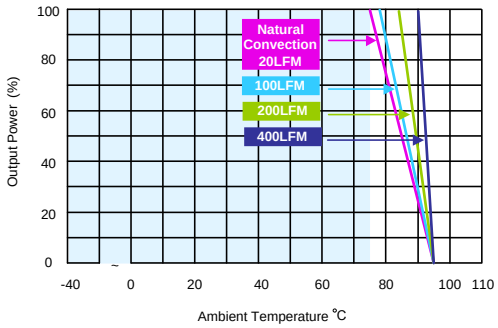
Remote On/Off Control

Parameter	Conditions	Min.	Typ.	Max.	Unit
Converter On	Open or high impedance				
Converter Off	2~4mA current applied via 1Kohm resistor				
Standby Input Current	Supply Off & Nominal Vin	---	2.5	---	mA

Environmental Specifications

Parameter	Conditions	Min.	Max.	Unit
Operating Ambient Temperature Range (See Power Derating Curve)	Natural Convection	-40	+85	℃
Case Temperature		---	+95	℃
Storage Temperature		-55	+125	℃
Humidity (non condensing)		---	95	% rel. H
Lead Temperature (1.5mm from case for 10Sec.)		---	260	℃

Power Derating Curve

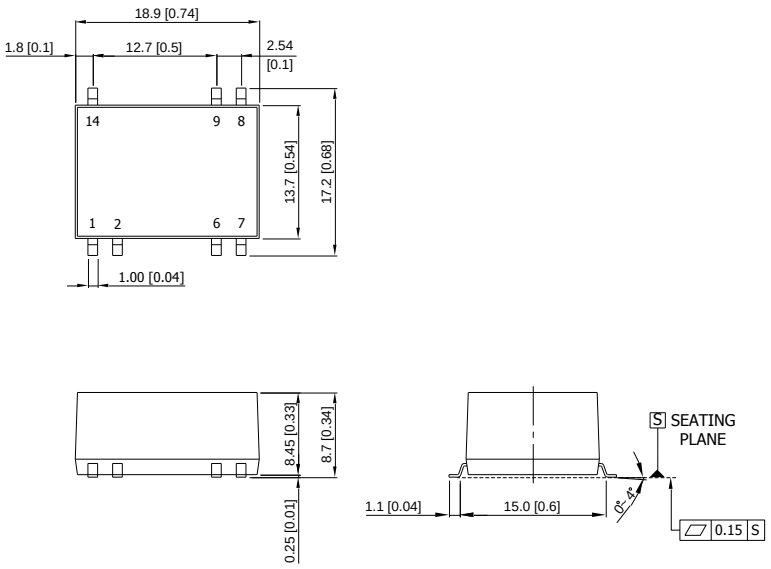


Notes

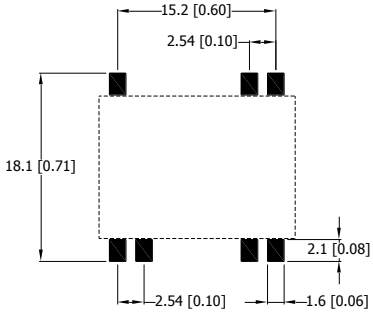
1 Specifications typical at Ta=+25℃, resistive load, nominal input voltage, rated output current unless otherwise noted.
2 We recommend to protect the converter by a slow blow fuse in the input supply line.
3 Other input and output voltage may be available, please contact factory.
4 That “natural convection” is about 20LFM but is not equal to still air (0 LFM).
5 Specifications are subject to change without notice.

Package Specifications

Mechanical Dimensions



Connecting Pin Patterns



- ▶All dimensions in mm (inches)
- ▶Tolerance: X.X±0.5 (X.XX±0.02)
  X.XX±0.25 (X.XXX±0.01)
- ▶Pins ±0.05(±0.002)

Pin Connections

Pin	Single Output	Dual Output
1	-Vin	-Vin
2	Remote On/Off	Remote On/Off
6	NC	Common
7	NC	-Vout
8	+Vout	+Vout
9	-Vout	Common
14	+Vin	+Vin

NC: No Connection

Physical Characteristics

Case Size	:	18.9x13.7x8.45mm (0.74x0.54x0.33 inches)
Case Material	:	Non-Conductive Black Plastic (flammability to UL 94V-0 rated)
Pin Material	:	Phosphor bronze
Weight	:	4.5g

Part Numbering System

S	K	01	S	05	03	A
Form factor	Family series	Watt	Number of Outputs	Input Voltage	Output Voltage	Option Code
D-DIP	A~Z	01:1W	S - Single	03:3.3V	03:3.3V	A - Std. Functions
P-SIP		02:2W	D- Dual	05: 5V	05: 5V	
S-SMD		03:3W		12:12V	12:12V	
		04:4W		24: 24V	15: 15V	
		06:6W		48:48V	24: 24V	

WARRANTY

Delta offers a three(3) years limited warranty. Complete warranty information is listed on our web site or is available upon request from Delta.

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- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
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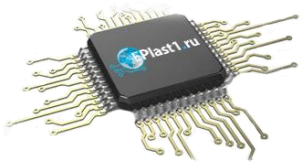
- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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