S36SE series

17W Single output DC/DC Converter

FEATURES

- Efficiency up to 87%
- Package with Industry Standard Pinout
- Package Dimension:
  29.4 x25.6 x10.2mm (1.16” x1.01” x0.40”)
- Isolation Voltage 1500VDC
- Operating Temperature range - 40°C to +85°C
- Six-sided shield metal case
- Lead free, RoHs Compliant
- Over current protection
- Short Output Protection
- 3 Years Product Warranty

The S36SE series are miniature, isolated 17W DC/DC converters with 1500VDC isolation. The S36SE family comes with a host of industry-standard features, such as over current protection, over voltage protection, and remote on/off. All models have an untra-wide 4:1 input voltage range (18V to 75V). With operating temperature of -40°C to +85°C, it is suitable for customers’ critical applications, such as process control and automation, transportation, data communication and telecom equipment, test equipment, medical device and everywhere where space on the PCB is critical.

Model List

Model Number	Input Voltage (Range)	Output Voltage	Output Current		Input Current		Load Regulation	Maxcapacitive Load	Efficiency (typ.)
			Max.	Min.	@Max. Load	@No Load			@Max. Load
	VDC	VDC	mA	mA	mA(typ.)	mA(typ.)	mV	uF	%
S36SE3R305	36 (18 ~ 75)	3.3	5000	0	1300	20	10	1000	86.5
S36SE05003		5	3000	0	1100	15	10	1000	83.5
S36SE12001		12	1300	0	1100	15	10	500	87

Input Characteristics

Item	Model	Min.	Typ.	Max.	Unit
Input Surge Voltage (100 msec)	All Models			100	VDC
Input Turn-On Voltage Threshold	All Models	16	17	18	VDC
Input Turn-Off Voltage Threshold	All Models	15	16	17	VDC
Input Under-Voltage Lockout Hysteresis	All Models	0.5	1	1.5	VDC
Off-Converter Input Current	All Models		5		mA
Reverse Polarity Input Current	All Models	---	---	0.3	A
Input Filter	All Models	Internal PI Filter			
Internal Power Dissipation	3.3V		3.6		W
	5V		3.6		W
	12V		3.0		W

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Output Characteristics

Item	Conditions	Min.	Typ.	Max.	Unit
Output Voltage Accuracy		---	±1.0	±2.0	%Vo
Output Voltage Balance	Dual Output, Balanced Loads	---	---	---	%Vo
Line Regulation	Vin=18V to 75V	---	---	10	mV
Load Regulation	Io=0% to 100%			10	mV
Ripple & Noise (20MHz)	3.3V, 1uF ceramic, 10uF tantalum	---	50	---	mV_{P-P}
Ripple & Noise (20MHz)	5V, 1uF ceramic, 10uF tantalum	---	50	---	mV_{P-P}
Ripple & Noise (20MHz)	12V, 1uF ceramic, 10uF tantalum	---	50	---	mV_{P-P}
Total Outupt Voltage Range	Over load, line and temperature	---	---	±3	%Vo
Output DC Current-Limit Range	Output Voltage 10% Low	110		150	%Iomax
Short Output Protection	Continuous, Auto-recovery				
Output Over-Voltage Protection		115		150	%Vo

General Characteristics

Item	Conditions	Min.	Typ.	Max.	Unit
I/O Isolation Voltage (rated)		---	---	1500	VDC
I/O Isolation Resistance		10	---	---	MΩ
I/O Isolation Capacitance		---	1000		pF
Switching Frequency			450		KHz
MTBF (calculated)	Io=80%Iomax, Ta=25℃,300LFM	-----	5M	-----	Hours

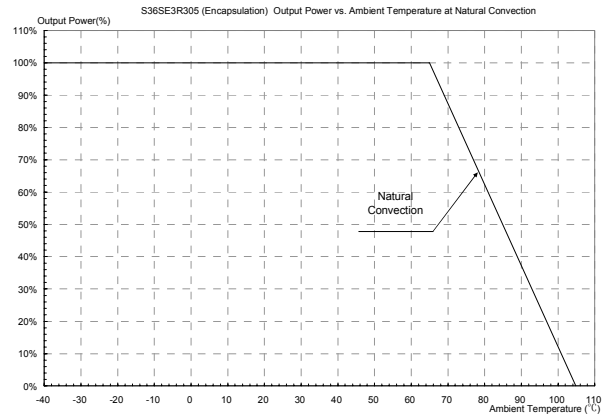
Recommend External Input Fuse

All Models			
2000mA Slow-Blow Type			

Environmental Specifications

Parameter	Conditions	Min.	Max.	Unit
Operating Temperature Range (with Derating)	Ambient	-40	+85	℃
Case Temperature		---	+105	℃
Storage Temperature Range		-50	+125	℃
Humidity (non condensing)		---	95	% rel. H
Cooling	Free-Air convection			
Lead Temperature (1.5mm from case for 10Sec.)		---	260	℃

Power Derating Curve



Notes

1. Specifications typical at Ta=+25℃, resistive load, nominal input voltage and rated output current unless otherwise noted.
2. Ripple & Noise measurement bandwidth is 0-20MHz.
3. All DC/DC converters should be externally fused at the front end for protection.
4. Specifications are subject to change without notice.

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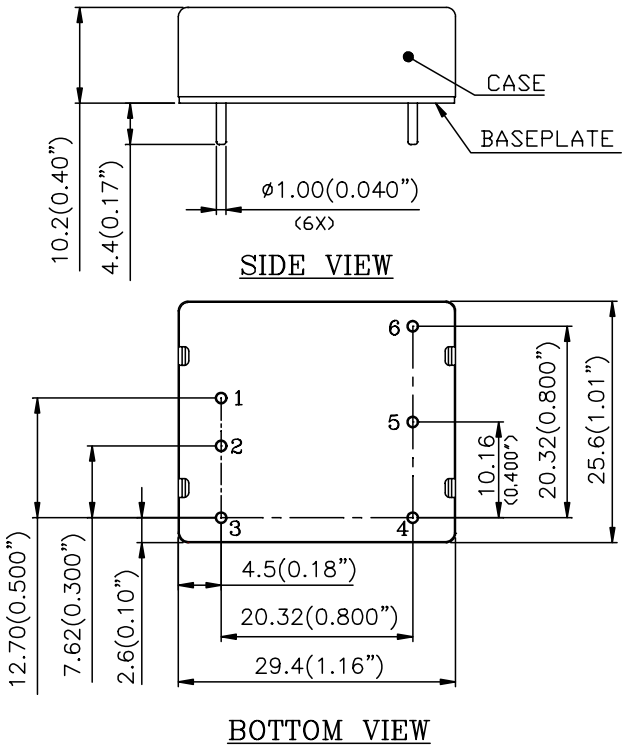
Mechanical Drawing

Mechanical Dimensions



Pin Connections

Pin	Function
1	+Vin
2	-Vin
3	on/off
4	-Vout
5	Trim
6	+Vout

- All dimensions in mm (inches)
- Tolerance: X.X±0.5 (X.XX±0.02)
  X.XX±0.25 (X.XXX±0.010)
- Pins Diameter : ±0.10(±0.004)

Physical Outline

Case Size	:	29.4x25.6x10.2mm (1.16x1.01x0.40 Inches)
Case Material	:	Al alloy; finish: anodize black
Baseplate material		No conductive FR-4
Pin material		Copper with matte Tin plating and Nickel under plating
Weight	:	18.0grams

Part Numbering System

S	36	S	E	3R3	05	N	R	F	G
Form factor	Input voltage	Number of output	Product series	Output voltage	Output current	On/off logic	Pin length		Option Code
S -	36 - 18~75V	S - single	E -	3R3 - 3.3V 050 - 5V 120 - 12V	05 - 5A 03 - 3A 01 – 1A	N - negative P - Positive	K - 0.110" N - 0.146" R - 0.171" D - 0.24" S - 0.189"	F - RoHS 6/6 (Lead Free) Space - RoHS5/6	G - with metal case

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. Information furnished by Delta is believed to be accurate and reliable. However, no responsibility is assumed by Delta for its use, nor for any infringements of patents or other rights of third parties, which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Delta. Delta reserves the right to revise these specifications at any time, without notice.

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