

CUSTOMER: SOLLAE

PART NUMBER:



APPROVAL SHEET

FOR

SWITCHING ADAPTER

MODEL NO.

DSC-6PFA-05 FEU 050100

ORDER NO: SP-236637

承認書確認后請簽回一份

CUSTOMER APPROVED SIGNATURE

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1. SPECIFICATION

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0. REVISION CHANGE DESCRIPTION

Revision	Description	Date
A	Initial release	2012.07.02

1. GENERAL DESCRIPTION

This specification defines the input, output, performance characteristics, environment, noise and safety requirements for a 5 watts switching type power adapter.

The adapter input/output are full range AC input and +5V DC with 5 watts maximum output.

2. INPUT REQUIREMENT

2-1 AC INPUT VOLTAGE

MINIMUM	NOMINAL	MAXIMUM
90 VAC	100-240 VAC	264 VAC

2-2 AC INPUT FREQUENCY

MINIMUM	NOMINAL	MAXIMUM
47 Hz	50 / 60 Hz	63 Hz

2-3 AC INPUT CURRENT

NOMINAL AC INPUT VOLTAGE	0.2 A maximum
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2-4 AC INRUSH CURRENT

AT FULL LOAD, 25 DEGREE C, COLD START

NOMINAL AC INPUT VOLTAGE	No damage shall be occurred and the input fuse shall not be blown up.
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2-5 CONFIGURATION

Wall-mount type, EU-pin, 2 Conductors, < Live, Neutral >

2-6 POWER CONSUMPTION ON POWER SAVING MODE

LOAD	INPUT CONDITION	INPUT POWER REQUIREMENT
0 A	115 VAC 60 Hz	0.3W maximum
0 A	230 VAC 50 Hz	0.3W maximum

1. SPECIFICATION

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3. OUTPUT REQUIREMENT

3-1	DC OUTPUT VOLTAGE	+5 V
3-2	MINIMUM LOAD CURRENT	0.05 A
3-3	NOMINAL LOAD CURRENT	1 A
3-4	NOMINAL OUTPUT POWER	5 W
3-5	TOTAL OUTPUT REGULATION	+/- 5 %
3-6	LINE REGULATION	+/- 5 %
		At nominal input voltage and full load
3-7	RIPPLE AND NOISE	300 mVp-p maximum
		At 20 MHz, and output parallel with 0.1uF & 10uF capacitors to ground Temperature at 25°C, At 115/230VAC AC input voltage
3-8	AVERAGE EFFICIENCY	68.17% minimum
		Meet standard for energy star level: V
		ERP : 2009/125/EC
3-9	HOLD-UP TIME	5 mS minimum
		At nominal input AC voltage and full load
3-10	TURN-ON DELAY	2 Seconds maximum
3-11	PROTECTION	
	OVER-CURRENT PROTECTION	2A maximum with auto-recovery function
	OVER-VOLTAGE PROTECTION	10VDC maximum
	SHORT-CIRCUIT PROTECTION	The adapter shall not be damaged by short the DC output to Ground.
3-12	REMARK	Unless otherwise specification output load must set at CR mode.

1. SPECIFICATION

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4. MECHANICAL REQUIREMENT

4-1 DIMENSION

67 (L) * 26 (W) * 72.2 (H) mm maximum

4-2 WEIGHT

80 g maximum

4-3 INPUT PLUG TYPE

Wall-mount type, EU-pin, 2 Conductors, < Live, Neutral >

4-4 OUTPUT CORD

WIRE: 22AWG/2C 2468, 1800mm

PLUG: JACK PLUG 5.5*2.1*9.5mm

5. ENVIRONMENTAL REQUIREMENT

5-1 COOLING

Cooling shall be with natural convection cooling

5-2 OPERATING TEMPERATURE

0 °C TO 40 °C

5-3 STORAGE TEMPERATURE

-20 °C TO +60 °C

5-4 OPERATING HUMIDITY

20 ~ 85 % RH. NON-CONDENSING

5-5 STORAGE HUMIDITY

5 ~ 95 % RH. NON-CONDENSING

5-6 VIBRATION TEST REQUIREMENT

(Non-operating, with packing) Reference to IEC. 68-2-6

Test conditions		Acceptance criteria
1.Frequency	5 ~ 500 Hz	NOMINAL functional test should be satisfied after the test
2.Sweep	2hour. For each axis (X, Y, Z)	
3.Acceleration	0.6G (5~50 Hz, peak - peak), 1.5G (50~500 Hz, peak - peak)	
4.Displacement	0.4 mm (5~50 Hz)	

1. SPECIFICATION

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6. SAFETY REQUIREMENT

6-1 DIELECTRIC WITHSTANDING VOLTAGE TEST (HI-POT TEST)

Primary To Secondary: 3000VAC 10mA 1minute or 4242VDC 10mA 1 minute

6-2 LEAKAGE CURRENT

0.25mA maximum, at nominal AC input voltage and frequency

6-3 SAFETY STANDARD

Designed to meet TUV-GS(EN60950-1)

6-4 EMI STANDARD

Designed to meet CE(EN55022)

7. RELIABILITY




7-1. MEAN TIME BETWEEN FAILURE (MTBF)

The power supply shall be designed and produced to have a mean time between failures (MTBF) of 50000 operating hours minimum conditions: 80% maximum load at 25°C, nominal input voltage.

Standard: MIL-HDBK-217F




6. SAFETY LICENSE(TUV-GS)

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Zertifikat		Certificate			
Zertifikat Nr. <i>Certificate No.</i> S1 50148464		Blatt <i>Page</i> 0001			
Ihr Zeichen <i>Client Reference</i> X.R.Z.		Unser Zeichen <i>Our Reference</i> 05-RXZ- 16015403 001		Längstens gültig bis <i>Latest expiration date</i> 25.02.2014 (day/mo/yr)	
Genehmigungsinhaber <i>License Holder</i> Dee Van Enterprise Co., Ltd. No. 5, Pao-Kao Road Hsin Tien, Taipei 231 Taiwan			Fertigungsstätte <i>Manufacturing Plant</i> Dee Van Electronics (Longchuan) Co., Ltd. Meichun Industrial District Longchuan Country Heyuan, Guangdong 517300 P.R. China		
Prüfzeichen <i>Test Mark</i>		Geprüft nach <i>Tested acc. to</i> EN 60950-1:2006 ZEK 01.1-08/06.08			
					
Der Anhang I der Richtlinie 2006/95/EG ist eingehalten. Das Zertifikat kann im Rahmen der Konformitätserklärung nach Anhang III verwendet werden. <i>Annex I of the directive 2006/95/EC is complied with. The certificate can be used in connection with the EC declaration of conformity acc. to Annex III.</i>					
Zertifiziertes Produkt (Geräteidentifikation) <i>Certified Product (Product Identification)</i>				Lizenzentgelte - Einheit <i>License Fee - Unit</i>	
Netzgerät (Switching Adapter)					
Serienbezeichnung : DSC-6PFA-a FEU xy (Series Type Designation)				15	
a = 05, 12 x = Dreistellige Zahl, welche die die Ausgangsspannung in Volt angibt, nach Teilung der Zahl durch 10. (Are 3 numerical digits, which represent the output voltage in Volt after dividing the number by 10)					
y = Dreistellige Zahl, welche die den Ausgangsstrom in A angibt, nach Teilung der Zahl durch 100. (Are 3 numerical digits, which represent the output current in A after dividing the number by 100)					
Nenneingangswerte(Rated Input) : AC 100-240V; 50/60Hz; 0,2A					
Schutzklasse (Protection Class) : II					
Umgebungstemperatur (Ambient Temperature) : 50°C					
Geprüfte Ausgangswerte siehe Blatt 0002 (Tested Output Values see page 0002)					
ANLAGE (Appendix) : 1					
Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde. Produkt und Fertigungsstätte erfüllen § 4 (1) bzw. (2) und § 7(1) des Geräte- und Produktsicherheitsgesetzes. <i>This certificate is based on our Testing and Certification Regulation. Product and production fulfill par 4 Art. 1 or Art. 2 and Par 7 Art. 1 of the German Equipment and Product Safety Law.</i>					
TÜV Rheinland Product Safety GmbH, Am Grauen Stein, D-51105 Köln Tel.: (+49/221)8 06 - 13 71 e-mail: cert-validity@de.tuv.com Fax: (+49/221)8 06 - 39 35 http://www.tuv.com/safety				15	
					
				Zertifizierungsstelle Dipl.-Ing. S. O. Steinke	
Ausstellungsdatum <i>Date of Issue</i> : 26.02.2009 (day/mo/yr)					

6. SAFETY LICENSE(TUV-GS)

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Zertifikat		Certificate			
Zertifikat Nr. <i>Certificate No.</i>		Blatt <i>Page</i>			
S1 50148464		0002			
Ihr Zeichen <i>Client Reference</i>		Unser Zeichen <i>Our Reference</i>		Längstens gültig bis <i>Latest expiration date</i>	
X.R.Z.		05-RXZ- 16015403 001		25.02.2014 <i>(day/mo/yr)</i>	
Genehmigungsinhaber <i>License Holder</i>			Fertigungsstätte <i>Manufacturing Plant</i>		
Dee Van Enterprise Co., Ltd. No. 5, Pao-Kao Road Hsin Tien, Taipei 231 Taiwan			Dee Van Electronics (Longchuan) Co., Ltd. Meichun Industrial District Longchuan Country Heyuan, Guangdong 517300 P.R. China		
Prüfzeichen <i>Test Mark</i>		Geprüft nach <i>Tested acc. to</i>			
		EN 60950-1:2006 ZEK 01.1-08/06.08			
Der Anhang I der Richtlinie 2006/95/EG ist eingehalten. Das Zertifikat kann im Rahmen der Konformitätserklärung nach Anhang III verwendet werden. <i>Annex I of the directive 2006/95/EC is complied with. The certificate can be used in connection with the EC declaration of conformity acc. to Annex III.</i>					
Zertifiziertes Produkt (Geräteidentifikation)				Lizenzentgelte - Einheit	
Certified Product (Product Identification)				License Fee - Unit	
Netzgerät (Switching Adapter)					
wie Blatt (as page) 01					
Fortsetzung (Continuation)					
	Ausgangsspannung (Output Voltage)	Ausgangsstrom (Output Current)	Ausgangsleistung (Output Power)		
	DC (V)	Max. (A)	Max. (W)		
a = 05,	5,0 - 7,5	1,0	5,2		
a = 12,	8,0 - 12,0	0,75	6,0		
Vermerk: Ausgangsspannung und -strom haben Werte mit einer entsprechenden Schrittweite von 0,1V und 0,01A. Ausgangsspannung multipliziert mit Ausgangsstrom sind nur bis zur max. Ausgangsleistung geprüft. Dieses Netzgerät ist geprüft und erfüllt die Anforderungen nach Abschnitt 2,5 als Stromquelle mit begrenzter Leistung. (Remark: Output voltage and -current have values in step of 0,1V and 0,01A accordingly. The output voltage multiplied with output current are only tested up to the max.output power. The equipment is also tested and complied with sub-clause 2,5 as limited power source.)					
Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde. Produkt und Fertigungsstätte erfüllen § 4 (1) bzw. (2) und § 7(1) des Geräte- und Produktsicherheitsgesetzes. <i>This certificate is based on our Testing and Certification Regulation. Product and production fulfill par 4 Art. 1 or Art. 2 and Par 7 Art. 1 of the German Equipment and Product Safety Law.</i>					
TÜV Rheinland Product Safety GmbH, Am Grauen Stein, D-51105 Köln Tel.: (+49/221)8 06 - 13 71 e-mail: cert-validity@de.tuv.com Fax: (+49/221)8 06 - 39 35 http://www.tuv.com/safety					
Ausstellungsdatum <i>Date of Issue</i> : 26.02.2009 (day/mo/yr)				 Dipl.-Ing. S. O. Steinke	

10020 6109 © TÜV, TÜV and TÜV are registered trademarks. All further and specific requirements are noted.

6. SAFETY LICENSE(TUV-GS)

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Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
 S1 50148464 Blatt *Page*
 0003

<i>Ihr Zeichen Client Reference</i>	<i>Unser Zeichen Our Reference</i>	<i>Längstens gültig bis Latest expiration date (day/mo/yr)</i>
X.R.Z.	05-RXZ- 16015403 001	25.02.2014

Genehmigungsinhaber License Holder
 Dee Van Enterprise Co., Ltd.
 No. 5, Pao-Kao Road
 Hsin Tien, Taipei 231
 Taiwan

Fertigungsstätte Manufacturing Plant
 Dee Van Technology (Longchuan)
 Co., Ltd.
 Meichun Industrial District
 Longchuan Country
 Heyuan, Guangdong 517300
 P.R. China

Prüfzeichen Test Mark



Geprüft nach Tested acc. to
 EN 60950-1:2006
 ZEK 01.1-08/06.08

Der Anhang I der Richtlinie 2006/95/EG ist eingehalten. Das Zertifikat kann im Rahmen der Konformitätserklärung nach Anhang III verwendet werden.
Annex I of the directive 2006/95/EC is complied with. The certificate can be used in connection with the EC declaration of conformity acc. to Annex III.

Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

Netzgerät (Switching Adapter)

wie Blatt (as page) 0001

Ergänzung
(Addition)

Fertigungsstätte : siehe oben
(Factory) (see above)

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.
 Produkt und Fertigungsstätte erfüllen § 4 (1) bzw. (2) und § 7(1) des Geräte- und Produktsicherheitsgesetzes.
*This certificate is based on our Testing and Certification Regulation.
 Product and production fulfill par 4 Art. 1 or Art. 2 and Par 7 Art. 1 of the German Equipment and Product Safety Law.*

TÜV Rheinland Product Safety GmbH, Am Grauen Stein, D-51105 Köln
 Tel.: (+49/221)8 06 - 13 71 e-mail: cert-validity@de.tuv.com
 Fax: (+49/221)8 06 - 39 35 http://www.tuv.com/safety



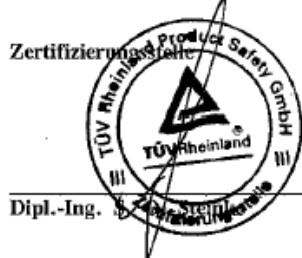
Ausstellungsdatum Date of Issue : 26.02.2009 (day/mo/yr)



Dipl.-Ing. [Name]

6. SAFETY LICENSE(TUV-GS)

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Zertifikat		Certificate			
Zertifikat Nr. <i>Certificate No.</i> S1 50148464		Blatt <i>Page</i> 0004			
Ihr Zeichen <i>Client Reference</i> X.R.Z:		Unser Zeichen <i>Our Reference</i> 05-RXZ- 16015403 001		Längstens gültig bis <i>Latest expiration date</i> 25.02.2014 <i>(day/mo/yr)</i>	
Genehmigungsinhaber <i>License Holder</i> Dee Van Enterprise Co., Ltd. No. 5, Pao-Kao Road Hsin Tien, Taipei 231 Taiwan			Fertigungsstätte <i>Manufacturing Plant</i> Dee Van Electronics (Shenzhen) Co., Ltd. The 5th Industrial District Gongming, Bao An District Shenzhen, Guangdong 518106 P.R. China		
Prüfzeichen <i>Test Mark</i>		Geprüft nach <i>Tested acc. to</i> EN 60950-1:2006 ZEK 01.1-08/06.08			
					
Der Anhang I der Richtlinie 2006/95/EG ist eingehalten. Das Zertifikat kann im Rahmen der Konformitätserklärung nach Anhang III verwendet werden. <i>Annex I of the directive 2006/95/EC is complied with. The certificate can be used in connection with the EC declaration of conformity acc. to Annex III.</i>					
Zertifiziertes Produkt <i>(Geräteidentifikation)</i> Certified Product <i>(Product Identification)</i>			Lizenzentgelte - Einheit <i>License Fee - Unit</i>		
Netzgerät (Switching Adapter)					
wie Blatt (as page) 0001					
Ergänzung (Addition)					
Fertigungsstätte : siehe oben (Factory) (see above)					
<p>Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde. Produkt und Fertigungsstätte erfüllen § 4 (1) bzw. (2) und § 7(1) des Geräte- und Produktsicherheitsgesetzes. <i>This certificate is based on our Testing and Certification Regulation. Product and production fulfill par 4 Art. 1 or Art. 2 and Par 7 Art. 1 of the German Equipment and Product Safety Law.</i></p> <p>TÜV Rheinland Product Safety GmbH, Am Grauen Stein, D-51105 Köln Tel.: (+49/221)8 06 - 13 71 e-mail: cert-validity@de.tuv.com Fax: (+49/221)8 06 - 39 35 http://www.tuv.com/safety</p> <p>Ausstellungsdatum <i>Date of Issue</i> : 26.02.2009 (day/mo/yr)</p>					
			 Zertifizierungsstelle Dipl.-Ing.		




6. SAFETY LICENSE(TUV-GS)

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Zertifikat		Certificate			
Zertifikat Nr. <i>Certificate No.</i> S1 50148464		Blatt <i>Page</i> 0006			
Ihr Zeichen <i>Client Reference</i> X.R.2.		Unser Zeichen <i>Our Reference</i> 05-RX- 16015403 003		Längstens gültig bis <i>Latest expiration date (day/mo/yr)</i> 25.02.2014	
Genehmigungsinhaber <i>License Holder</i> Dee Van Enterprise Co., Ltd. No. 5, Pao-Kao Road Hsin Tien, Taipei 231 Taiwan			Fertigungsstätte <i>Manufacturing Plant</i> Dee Van Electronics (Longchuan) Co., Ltd. Meichun Industrial District Longchuan Country Heyuan, Guangdong 517300 P.R. China		
Prüfzeichen <i>Test Mark</i>		Geprüft nach <i>Tested acc. to</i> EN 60950-1:2006+A11+A1 ZEK 01.2-08/12.08			
					
Der Anhang I der Richtlinie 2006/95/EG ist eingehalten. Das Zertifikat kann im Rahmen der Konformitätsklärung nach Anhang III verwendet werden. <i>Annex I of the directive 2006/95/EC is complied with. The certificate can be used in connection with the EC declaration of conformity acc. to Annex III.</i>					
Zertifiziertes Produkt (Geräteidentifikation) <i>Certified Product (Product Identification)</i>				Lizenzentgelte - Einheit <i>License Fee - Unit</i>	
<u>Netzgerät</u> (Switching Adapter) wie Blätter (see pages) 0901-0905					
Änderung (Change)					
Prüfgrundlage (Test Requirement)				: siehe oben (see above)	
<p>Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde. Produkt und Fertigungsstätte erfüllen § 4 (1) bzw. (2) und § 7(1) des Geräte- und Produktsicherheitsgesetzes. <i>This certificate is based on our Testing and Certification Regulation. Product and production fulfill par 4 Art. 1 or Art. 2 and Par 7 Art. 1 of the German Equipment and Product Safety Law.</i></p> <p>TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg Tel.: (+49)2218 06 - 13 71 e-mail: cert.valid@de.tuv.com Fax: (+49)2218 06 - 39 35 http://www.tuv.com/safety</p>					
Ausstellungsdatum <i>Date of Issue</i> : 12.10.2010 (day/mo/yr)				Zertifizierungsstelle   Dipl.-Ing. (FH) T. Zimmer	

6. SAFETY LICENSE(CE)

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C E R T I F I C A T E		
of Conformity Low Voltage Directive 2006/95/EC		
Registration No.:	AN 50148472 0001	
Report No.:	16015403 001	
Holder:	Dee Van Enterprise Co., Ltd. No. 5, Pao-Kao Road Hsin Tien, Taipei 231 Taiwan	
Product:	<u>Power Supply</u> (Switching Adapter)	
Identification:	DSC-6PFA-a FEU xy For a detailed listing of the variables a, x, y refer to license S1 50148464 0001-0004. Serial No.: n.a. (Issued in conjunction with above TÜV Rheinland license.)	
<p>This certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the Licence Holder's disposal. This is to certify that the tested sample is in conformity with all revision of Annex I of Council Directive 2006/95/EC, in its latest amended version, referred to as the Low Voltage Directive. This certificate does not imply assessment of the series-production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the EC declaration of conformity according to Annex III of the Directive.</p>		
Cologne, <u>26.02.2009</u>		Certification Body  Dipl.-Ing. S. D. Steinke
TÜV Rheinland Product Safety GmbH - Am Grauen Stein - D-51105 Köln		
CE The CE marking may be used if all relevant and effective EC Directives are complied with. CE		

6. SAFETY LICENSE(CE)

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NS Technology Co., Ltd.
 Chenwu Industrial Zone, Houjie Town,
 Dongguan City, Guangdong, China

Tel : 86-769-85935656
 Fax : 86-769-85991080
 Http : //www.nsco.cn

Certificate of Compliance

No. NSE-E09093886

The following products have been tested by us with the listed standards and found in compliance with the council EMC directive 2004/108/EC. It is demonstrative for the compliance with this EMC Directive.

Applicant : Dee Van Enterprise Co., Ltd.
Address : No.5, Pao-Kao Road, Hsin-Tien, Taipei 231, Taiwan
Product : Switching Power Adaptor
Trade Name : DVE
Model No. : DSC-6PFA-a bc de
 DSC:Dee van Switching Charger
 6:Output power 6.0W max
 P:PWM (Pulse Width Modulation) Topology
 F:Primary feedback
 A:Sequence ID: A
 a:Output voltage range 05; 12
 b:Input voltage range F: Full range (100-240VAC)
 c:Input AC-plug type US: USA /Japan/Taiwan
 EU: Europe CH:China UK: England
 AU:Australia KA: Korea
 d:Output voltage : 3 digit number
 e:Output current : 3 digit number

Test Standards :	
CISPR 22: 2006 Class B EN 55022: 2006 Class B	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement
EN 61000-3-2:2006	Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current up to and including 16 A per phase)
EN 61000-3-3:1995+A1:2001+A2:2005	Electromagnetic compatibility (EMC) -- Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection
CISPR 24:1997+A1:2001+A2:2002 EN 55024:1998+A1:2001+A2:2003	Information technology equipment - Immunity characteristics - Limits and methods of measurement



Steven Lee
 Manager

Date : Sep 28, 2009

The statement is based on a single evaluation of one sample of above mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab's logo.