



**Test Certificate No.: 9912311768**

In accordance with Clause 12 of the Standards Law – 1953

**Details of order:**

Name of customer	: Bureau Veritas Consumer Product Services GmbH
Address	: Businesspark A96, 86842 Türkheim, Germany
Date of order	: 24/04/2018

**Description of sample:**

Solar Inverter	
Models	: STP3.0-3AV-40, STP4.0-3AV-40, STP5.0-3AV-40, STP6.0-3AV-40
Manufacturer	: SMA Solar Technology AG, Germany
(see additional product information on pages 2-13)	

**Sampling details:**

No sample required
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**Nature of test:**

<p>Review of test reports:                  Ref. No.: 50706744 001 dated 21/11/17, issued by TÜV Rheinland (Shanghai) Co., Ltd.,                  Ref. No.: <b>18TH0325-SI4777_0</b> dated 07/03/19, issued by                  Bureau Veritas Consumer Products Services, Germany GmbH                  for the above-specified solar inverter models according to the following standards:</p> <p>IEC/EN 62109-1: 2010 – Safety of power converters for use in photovoltaic power system –                  Part 1: General requirements                  IEC/EN 62109-2: 2011 – Safety of power converters for use in photovoltaic power system –                  Part 2: Particular requirements for inverters</p> <p>SI 4777.2: 2005 - Grid connection of energy systems via inverters: Inverter requirements;                  SI 4777.3: 2005 - Grid connection of energy systems via inverters: Grid protection requirements,                  with Deviations for Israel according to the Guidelines for Importers, Installers and Owners of Electricity                  Generating Systems Using Photo-Voltaic Technology, regarding Adjustment of Photo-Voltaic Inverters:                  2013</p>
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This document contains 13 pages and may be used only in full.


**The test results in this report refer only to the item tested.**

This document alone is not sufficient for the release of goods from customs.

**Test Conclusions:**

<p>Based on the information provided in the above mentioned test reports, the above-specified solar inverter models <b>comply</b> with the Israeli requirements for grid-tied photovoltaic inverters.</p> <p>The models referred in this document employ an integrative residual current monitor (RCMU) for protection of the DC and AC lines.</p> <p>When installed in Israel, the inverter shall be adjusted according to Israeli requirements for grid-tied photovoltaic inverters regarding overvoltage/undervoltage, overfrequency/underfrequency protection.</p>
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Anatoly Oimatov   
 Product Safety Engineer  
 Electrical Safety Branch  
 Electronics and Telematics Laboratory  
 The Standards Institution of Israel  
 Date: 07/05/2019

Vladimir Chernikh   
 Senior Product Safety Engineer  
 Electrical Safety Branch  
 Electronics and Telematics Laboratory  
 The Standards Institution of Israel  
 Date: 07/05/2019


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**ADDITIONAL PRODUCT INFORMATION**

**Electrical Ratings**

Test item description .....	: Grid-tied photovoltaic inverter
Trademark .....	: 
Model / Type .....	: STP3.0-3AV-40, STP4.0-3AV-40, STP5.0-3AV-40, STP6.0-3AV-40

Ratings..... :	STP3.0-3AV-40	STP4.0-3AV-40
MPP DC voltage range [V] .....	125 - 800	
Input DC voltage range [V] .....	125 - 850	
Input DC current [A] .....	2 x 12	
Output AC voltage [V] .....	380/400/415 (3P,N,PE)	
Output AC current [A] .....	4,5	5,8
Output power [VA] .....	3000	4000

Ratings..... :	STP5.0-3AV-40	STP6.0-3AV-40
MPP DC voltage range [V] .....	125 - 800	
Input DC voltage range [V] .....	125 - 850	
Input DC current [A] .....	2 x 12	
Output AC voltage [V] .....	380/400/415 (3P,N,PE)	
Output AC current [A] .....	7,6	9,1
Output power [VA] .....	5000	6000

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**APPENDIX**  
**List of Critical Components**  
**(10 pages attached)**

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**Critical Components**

Material: e.g. external enclosure, PCB, closed-end connector, sleeves, cord anchorage etc

Components with winding: e.g. motor, transformer, magnetic coil etc.

Other components: e.g. switch, thermostat, heater, plug, internal wire, capacitor, relay, varistor etc.

Object/part No.	Manufacturer/ trademark	Type/ model	Technical data	Standard	Mark(s) of conformity
Heat-sink	Suzhou Huaya Intelligence Technology Co.,Ltd.	Aluminum	metal plate size: 360*392.5*170mm thickness: ≥2mm material: AL6063 T5、 AL5052 H32、 AL6061	IEC 62109-1	Test in unit
Bracket	Suzhou Fanfeng Mechanical and electrical Co.,Ltd.	Aluminum	metal plate size: 313*150*47mm thickness: T1.5 material: AL5052 H32	IEC 62109-1	Test in unit
Front cover	Minglida Precision Machinery Co.,Ltd.	Aluminum	metal plate size: 435*470*80mm thickness: T3.0mm material: ADC12	IEC 62109-1	Test in unit
DC coupler	Phoenix	PV-CF-S 2,5-6 (+) PV-CM-S 2,5-6 (- )	rated voltage:1100V; rated current:40A; IP degree:IP68 operating temperature: -40°C to 85°C	EN 50521	VDE 40031807
AC connecting wires	3Q WIRE & CABLE CO.,LTD	UL10271 AWG12 UL10269 AWG12	Rated temperature:105°C ; rated voltage:1000V	UL758 UL1581&CSA2 2.2	E341104
DC connecting wires	3Q WIRE & CABLE CO.,LTD	UL10271 AWG12	Rated temperature:105°C ; rated voltage:1000V	UL758 UL1581&CSA2 2.2	E341104
AC output coupler	PHOENIX CONTACT GMBH & CO.KG	PRC 5-FC-FS6 8-21	rated voltage: 600V; rated current: 30A	ANSI/UL 2238	E221474
DC switch	MERZ Schaltgerate GMBH + CO KG	MDC10-040- 1000-32E- 0174U-D-9006- ZEVEER-V01	Rated operational voltage :850V; Rated operational current:24A ; Environmental rating:IP65;	IEC/EN 60947- 3	CE
Power relay (RY703-RY708)	FUJITSU	FTR-K3-PS	contact rating:32A/250Vac; contact gap:Min.1.8mm	IEC/EN 61810- 1:2008	VDE 40011330

**Constructional Data Form (CDF) for Electrical Appliances**

ISO relay(RY101)	Omron	Omron/G2RG-2A4	contact rating:8A/250Vac; contact gap:1.5mm	ANSI/UL 508	E41643 CSA No.LR31928
Electrolytic capacitor (C169,C170,C178,C179)	NIPPON CHEMI-CON	ELXS451VSN471MA40S	Capacity:470uF; rated voltage:450Vdc; operating temperature: -25~105°C;	IEC 62109-1	Test in unit
Film capacitor (C186,C172)	Xiamen Faratronic Co., Ltd	C3D3L105KB#0C00	operating temperature: -40~105°C; rated voltage:1100Vdc; Capacity:1uF	IEC/EN 61071:2017 IEC61881-1:2010 EN61881-1:2011	TUV R 50266108
D166,D177	VISHAY	BYG23T-M3	Maximum repetitive peak voltage:1300V; Maximum DC forward current:1A; Maximum operating junction temperature: 150 °C	IEC 62109-1	Test in unit
IGBT (Q115,Q116)	FAIRCHILD	FGH40T120SMD	collector to Emitter voltage:1200V; collector current:40A@100°C operating temperature: -55~175°C;	IEC 62109-1	Test in unit
IGBT (Q114)	FAIRCHILD	FQB1P50	Drain source voltage:-500V; Drain current:continuous -1.5A@25°C; operating temperature: -55~150°C;	IEC 62109-1	Test in unit
IGBT (Q113)	VISHAY	IRFBF20S	Drain source voltage:900V; Drain current: continuous 1.7A@25°C; operating temperature: -55~150°C;	IEC 62109-1	Test in unit
INV module (U101-U103)	Vincotech	10-EY12M3A025SH-L347F08T	operating voltage:1200V; operating current:19A; operating temperature:-55~155°C;	IEC 62109-1	Test in unit
DC SPS MOSFET (Q105,Q106)	IXYS	IXTP3N120	Drain source voltage:1200V; Drain current: continuous 3A@25°C; operating temperature: -55~150°C;	IEC 62109-1	Test in unit

**Constructional Data Form (CDF) for Electrical Appliances**

AC SPS diode D127	FAIRCHILD	DF10S	Maximum repetitive peak voltage:1000V; Average rectified forward current:1.5A@40°C; operating junction temperature: -55~150°C	ANSI/UL 1012	E111753
AC SPS MOSFET Q127	FAIRCHILD	FQB5N90	Drain source voltage:900V; Drain current: continuous 5.4A@25°C; operating temperature: -55~150°C;	IEC 62109-1	Test in unit
X1 capacitor (C180,C177)	Xiamen Faratronic Co.,Ltd	C45S1334M91C 350	class:X1; operating temperature: -40~110°C; rated voltage: 440Vac/50Hz; capacity:0.33uF	IEC/EN 60384- 14:2013	VDE 40021925
X2 capacitor (C253,C257)	Xiamen Faratronic Co.,Ltd	C3D3L105KB#0 C00	class:X2; operating temperature: -40~105°C; rated voltage: 1100Vdc@70°C; capacity:1.0uF	IEC/EN 61071:2017 IEC61881- 1:2010 EN61881- 1:2011	TUV R 50266108
X2 capacitor (C217,C218)	Fara	C3D1M146KF#B C00	class:X2; operating temperature: -40~105°C; rated voltage: 1100Vdc@70°C; capacity:14uF	IEC/EN 61071:2017 IEC61881- 1:2010 EN61881- 1:2011	TUV R 50266108
X2 capacitor (C818- 820,C829-C831)	Fara	C4BR2225KBWC 450	class:X2; operating temperature: -40~110°C; rated voltage: 305Vac/50Hz; capacity:2.2uF	ANSI/UL60384- 14	E186600
Y2 capacitor (C245, C248, C821,C823, C825)	Vishay	BFC233860103	class:Y2; operating temperature: -40~105°C; rated AC voltage: 300Vac/50Hz; permissible DC voltage: 1000Vdc capacity:0.01uF	ANSI/UL1414	E112471

Constructional Data Form (CDF) for Electrical Appliances

Y1 capacitor (C232,C201,C231,C210,C196,C233)	EPCOS	B81123C1472M	class:Y1; Max operating temperature: 110°C; rated AC voltage: 500Vac/50Hz; capacity:0.0047uF	ANSI/UL1414 ANSI/UL60384	E97863
AC current sensor (HCT101-HCT103)	TAMURA	F02P015S05	Ambient operating temperature:-40~105°C; Rated current:15A;	ANSI/UL508	E243511
DC current sensor (HCT104-HCT105)	LEM	HLSR 10-P	Ambient operating temperature:-40~105°C; primary nominal current:10A;	ANSI/UL508	E189713
Optocoupler (U105-U117)	AVAGO technologies	ACPL-332J	clearance:8.3mm; creepage:8.3mm; operating temperature: -40~105°C;	ANSI/UL1577	E55361
AC filter inductor (CT702)	CORMEX ELECTRONICS IND.CO.,LTD	E-27360	3P COM- CHOKE 0.87mH@10kHz 2mm R5K H42x26x18-R5K Class B EMI	IEC 62109-1	Test in unit
- Core	Dong Yang Dmegc Magnetics Co.,Ltd.	--	H42x26x18-R5K	IEC 62109-1	Test in unit
- WIRE	Pacific Electric Wire & Cable Co Ltd	MW5-C(SS-F)	MW5-C(SS-F)	ANSI/UL 1446	E84081
- alternative	Tai-I Electric Wire & Cable Co Ltd	MW 5-C(PEW)	MW 5-C(PEW)	ANSI/UL 1446	E85640
- Base	Kingboard Laminates (Macao Commercial Offshore) Ltd	KB-6150	KB-6150 (FR-4) V-0 Thk=2.0mm HWI=0 HAI=2	ANSI/UL 746E, ANSI/UL 94, ANSI/UL 746F	E123995
- Tape	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	NO.CT 280B	NO.CT 280B(yellow)	ANSI/UL 510A	E165111
- Tube	Changyuan Electronics Group Co.,Ltd	PTFE CB -TT-S	PTFE CB -TT-S	ANSI/UL 224	E180908
- Epoxy	Dongguan Eatto Electronic Material Co Ltd	3300A-1/3300B-1	3300A-1/3300B-1	ANSI/UL 746A, ANSI/UL 746D, ANSI/UL 746C	E218090
AC filter inductor (CT703)	CORMEX ELECTRONICS IND.CO.,LTD	E-27359	3P COM- CHOKE 373uH@10kHz 2mm R5K H47x27x15-R5K Class B EMI	IEC 62109-1	Test in unit
- Core	Dong Yang Dmegc Magnetics Co.,Ltd.	--	H47x27x15-R5K	IEC 62109-1	Test in unit

**Constructional Data Form (CDF) for Electrical Appliances**

- WIRE	Pacific Electric Wire & Cable Co Ltd	MW5-C(SS-F)	MW5-C(SS-F)	ANSI/UL 1446	E84081
- alternative	Tai-I Electric Wire & Cable Co Ltd	MW 5-C(PEW)	MW 5-C(PEW)	ANSI/UL 1446	E85640
- Base	Kingboard Laminates (Macao Commercial Offshore) Ltd	KB-6150	KB-6150 (FR-4) V-0 Thk=2.0mm HWI=0 HAI=2	ANSI/UL 746E, ANSI/UL 94, ANSI/UL 746F	E123995
- Tape	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	NO.CT 280B	NO.CT 280B(yellow)	ANSI/UL 510A	E165111
- Tube	Changyuan Electronics Group Co.,Ltd	PTFE CB –TT-S	PTFE CB –TT-S	ANSI/UL 224	E180908
- Epoxy	Dongguan Eatto Electronic Material Co Ltd	3300A-1/3300B-1	3300A-1/3300B-1	ANSI/UL 746A, ANSI/UL 746D, ANSI/UL 746C	E218090
DC filter inductor	CORMEX ELECTRONICS IND.CO.,LTD	E-27359A	3P COM- CHOKE 373uH@10kHz 2mm R5K H47x27x15-R5K Class B EMI	IEC 62109-1	Test in unit
- Core	Dong Yang Dmegc Magnetics Co.,Ltd.	--	H47x27x15-R5K	IEC 62109-1	Test in unit
- WIRE	Pacific Electric Wire & Cable Co Ltd	MW5-C(SS-F)	MW5-C(SS-F)	ANSI/UL 1446	E84081
- alternative	Tai-I Electric Wire & Cable Co Ltd	MW 5-C(PEW)	MW 5-C(PEW)	ANSI/UL 1446	E85640
- Base	Kingboard Laminates (Macao Commercial Offshore) Ltd	KB-6150	KB-6150 (FR-4) V-0 Thk=2.0mm HWI=0 HAI=2	ANSI/UL 746E, ANSI/UL 94, ANSI/UL 746F	E123995
- Tape	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	NO.CT 280B	NO.CT 280B(yellow)	ANSI/UL 510A	E165111
- Tube	Changyuan Electronics Group Co.,Ltd	PTFE CB –TT-S	PTFE CB –TT-S	ANSI/UL 224	E180908
- Epoxy	Dongguan Eatto Electronic Material Co Ltd	3300A-1/3300B-1	3300A-1/3300B-1	ANSI/UL 746A, ANSI/UL 746D, ANSI/UL 746C	E218090
-Varnishes	Suzhou Taihu Electric Advanced Material Co.,Ltd	ET-90(a) MW28-C	ET-90(a) MW28-C	ANSI/UL 1446	E228349



**Constructional Data Form (CDF) for Electrical Appliances**

Transformer ( TX105, TX106)	CORMEX ELECTRONICS IND.CO.,LTD	E-27220	HFTX 80:166:166 PC40 EE13	IEC 62109-1	Test in unit
- Core	Dong Yang Dmegc Magnetics Co.,Ltd.	--	EE-13-DMR40	IEC 62109-1	Test in unit
- WIRE	Tai-I Electric Wire & Cable Co Ltd	MW-79C(UFWF)	MW-79C(UFWF)	ANSI/UL 1446	E234896
- alternative	Feng Ching Metal Corp	MW79(FSW)	MW79(FSW)	ANSI/UL 1446	E172395
- Bobbin	Sumitomo Bakelite Co Ltd	PM9630	PM9630	ANSI/UL 746A, ANSI/UL 746D, ANSI/UL 746C	E41429
- Insulating Tape	3m Company Electrical Markets Div (Emd)	NO.1350F-1	NO.1350F-1	ANSI/UL 510A	E17385
- alternative	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	NO.CT280B	NO.CT280B(yellow)	ANSI/UL 510A	E165111
- Margin Tape	3m Company Electrical Markets Div (Emd)	NO.44	NO.44	ANSI/UL 510A	E17385
- alternative	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	NO.WF*(c)(h)	NO.WF*(c)(h)	ANSI/UL 510A	E165111
- Epoxy	Dongguan Eatto Electronic Material Co Ltd	3300A-2/3300B-2	3300A-2/3300B-2 V-0	ANSI/UL 746A, ANSI/UL 746D, ANSI/UL 746C	E218090
-Varnishes	John C Dolph Co	BC-359	BC-359	ANSI/UL 1446	E317427
Transformer (TX102, TX103)	CORMEX ELECTRONICS IND.CO., LTD	E-27178	HFTX 50:100:100:100 FER PC40 EE19	IEC 62109-1	Test in unit
- Core	Dong Yang Dmegc Magnetics Co.,Ltd.	EE19-DMR40	EE19-DMR40	IEC 62109-1	Test in unit
- WIRE	Tai-I Electric Wire & Cable Co Ltd	MW-79C(UFWF)	MW-79C(UFWF)	ANSI/UL 1446	E234896
- alternative	Feng Ching Metal Corp	MW79(FSW)	MW79(FSW)	ANSI/UL 1446	E172395
- Bobbin	Sumitomo Bakelite Co Ltd	PM9630	PM9630	ANSI/UL 746A, ANSI/UL 746D, ANSI/UL 746C	E41429
- Insulating Tape	3m Company Electrical Markets Div (Emd)	NO.1350F-1	NO.1350F-1	ANSI/UL 510A	E17385
- alternative	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	NO.CT280B	NO.CT280B(yellow)	ANSI/UL 510A	E165111
- Margin Tape	3m Company Electrical Markets Div (Emd)	NO.44	NO.44	ANSI/UL 510A	E17385

**Constructional Data Form (CDF) for Electrical Appliances**

- alternative	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	NO.WF*(c)(h)	NO.WF*(c)(h)	ANSI/UL 510A	E165111
- Tube	Changyuan Electronics Group Co.,Ltd	PTFE CB –TT-S	PTFE CB –TT-S	ANSI/UL 224	E180908
-Varnishes	John C Dolph Co	BC-359	BC-359	ANSI/UL 1446	E317427
Transformer TX101	CORMEX ELECTRONICS IND.CO.,LTD	E-27189	HFTX 19:57:57:19 PC40 EE16 Gemei	IEC 62109-1	Test in unit
- Core	Dong Yang Dmegc Magnetics Co.,Ltd.	EE-16G-DMR40	EE-16G-DMR40	IEC 62109-1	Test in unit
- WIRE	Tai-I Electric Wire & Cable Co Ltd	MW-79C(UFWF)	MW-79C(UFWF)	ANSI/UL 1446	E234896
- alternative	Feng Ching Metal Corp	MW79(FSW)	MW79(FSW)	ANSI/UL 1446	E172395
- Bobbin	Sumitomo Bakelite Co Ltd	PM9630	PM9630	ANSI/UL 746A, ANSI/UL 746D, ANSI/UL 746C	E41429
- Insulating Tape	3m Company Electrical Markets Div (Emd)	NO.1350F-1	NO.1350F-1	ANSI/UL 510A	E17385
- alternative	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	NO.CT280B	NO.CT280B(yellow)	ANSI/UL 510A	E165111
- Margin Tape	3m Company Electrical Markets Div (Emd)	NO.44	NO.44	ANSI/UL 510A	E17385
- alternative	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	NO.WF*(c)(h)	NO.WF*(c)(h)	ANSI/UL 510A	E165111
- Tube	Changyuan Electronics Group Co.,Ltd	PTFE CB –TT-S	PTFE CB –TT-S	ANSI/UL 224	E180908
-Varnishes	John C Dolph Co	BC-359	BC-359	ANSI/UL 1446	E317427
Transformer TX104	CORMEX ELECTRONICS IND.CO.,LTD	E-27179A	HFTX 20:1:2:4:6:20 FERRITE HE4 EI28	IEC 62109-1	Test in unit
- Core	Dong Yang Dmegc Magnetics Co.,Ltd.	EI28-DMR40	EI28-DMR40	IEC 62109-1	Test in unit
- WIRE	Tai-I Electric Wire & Cable Co Ltd	MW-79C(UFWF)	MW-79C(UFWF)	ANSI/UL 1446	E234896
- alternative	Feng Ching Metal Corp	MW79(FSW)	MW79(FSW)	ANSI/UL 1446	E172395
- Bobbin	Sumitomo Bakelite Co Ltd	PM9630	PM9630	ANSI/UL 746A, ANSI/UL 746D, ANSI/UL 746C	E41429

**Constructional Data Form (CDF) for Electrical Appliances**

- Insulating Tape	3m Company Electrical Markets Div (Emd)	NO.1350F-1	NO.1350F-1	ANSI/UL 510A	E17385
- alternative	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	NO.CT280B	NO.CT280B(yellow)	ANSI/UL 510A	E165111
- Margin Tape	3m Company Electrical Markets Div (Emd)	NO.44	NO.44	ANSI/UL 510A	E17385
	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	NO.WF*(c)(h)	NO.WF*(c)(h)	ANSI/UL 510A	E165111
- Tube	Changyuan Electronics Group Co.,Ltd	PTFE CB –TT-S	PTFE CB –TT-S	ANSI/UL 224	E180908
- Epoxy	Dongguan Eatto Electronic Material Co Ltd	3300A-2/3300B-2 V-0	3300A-2/3300B-2 V-0	ANSI/UL 746	E218090
-Varnishes	John C Dolph Co	BC-359	BC-359	ANSI/UL 1446	E317427
Transformer TX108	CORMEX ELECTRONICS IND.CO.,LTD	E-27017A	HFTX 115:11:11 PC40 EF20 Gemei	IEC 62109-1	Test in unit
- Core	Dong Yang Dmegc Magnetics Co.,Ltd.	EF20-DMR40	EF20-DMR40	IEC 62109-1	Test in unit
- WIRE	Pacific Electric Wire & Cable Co Ltd	MW75C(DD)	MW75C(DD)	ANSI/UL 1446	E84081
- Alternative	Feng Ching Metal Corp	MW79(FSW)	MW79(FSW)	ANSI/UL 1446	E172395
- Bobbin	Chang Chun Plastics Co Ltd	T375J	T375J	ANSI/UL 746A, ANSI/UL 746D, ANSI/UL 746C	E59481
- Insulating Tape	3m Company Electrical Markets Div (Emd)	NO.1350F-1	NO.1350F-1	ANSI/UL 510A	E17385
- alternative	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	NO.CT280B(yellow)	NO.CT280B(yellow)	ANSI/UL 510A	E165111
- Margin Tape	3m Company Electrical Markets Div (Emd)	NO.44	NO.44	ANSI/UL 510A	E17385
- alternative	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	NO.WF*(c)(h)	NO.WF*(c)(h)	ANSI/UL 510A	E165111
- Tube	Changyuan Electronics Group Co.,Ltd	PTFE CB –TT-S	PTFE CB –TT-S	ANSI/UL 224	E180908
-Varnishes	John C Dolph Co	BC-359	BC-359	ANSI/UL 1446	E317427

**Constructional Data Form (CDF) for Electrical Appliances**

Boost inductor	TAMURA CORPORATION OF CHINA LTD	261-10269-00/261-10270-00	inductance :2mH@f=20kHz; operating temperature:-25~130°C	IEC 62109-1	Test in unit
- core	SHENZHEN POCO MAGNETIC CO.,LTD	FeSiAl alloy	FeSiAl alloy	IEC 62109-1	Test in unit
- WIRE	HENG YA ELECTRIC (KUN SHAN) CO.,LTD	Φ1.4 1-PEW	Φ1.4 1-PEW	ANSI/UL 1446	E245514
- HET-TU-G	CHANGYUAN GROUP LTD	Φ6	Φ6	ANSI/UL 224	E180908
- wire	shenzhen qiansheng plastic electronic co.,ltd	12AGW	12AGW UL10269 1000V	ANSI/UL 758	E148000
- tape	jingjiangshi yahua electronics technology co.,ltd	CT280	CT280	ANSI/UL 510A	E165111
- mylar tape	jingjiangshi yahua electronics technology co.,ltd	CT284	CT284	ANSI/UL 510A	E165111
invter inductor	TAMURA CORPORATION OF CHINA LTD	261-10271-00 261-10272-00 261-10273-00	inductance: 1.39mH@f=20kHz; operating temperature: -25~130°C	IEC 62109-1	Test in unit
- core	SHENZHEN POCO MAGNETIC CO.,LTD	FeSi alloy	FeSi alloy	IEC 62109-1	Test in unit
- WIRE	HENG YA ELECTRIC (KUN SHAN) CO.,LTD	Φ1.4 1-PEW	Φ1.4 1-PEW	ANSI/UL 1446	E245514
- HET-TU-G	CHANGYUAN GROUP LTD	Φ6	Φ6	ANSI/UL 224	E180908
- wire	shenzhen qiansheng plastic electronic co.,ltd	12AGW	12AGW UL10269 1000V	ANSI/UL 758	E148000
- tape	jingjiangshi yahua electronics technology co.,ltd	CT280	CT280	ANSI/UL 510A	E165111
- mylar tape	jingjiangshi yahua electronics technology co.,ltd	CT284	CT284	ANSI/UL 510A	E165111
DSP U501	TI	TMS320F28377D PTPS	input voltage:3.3V; operating junction temperature:-40~150°C	IEC 62109-1	Test in unit
RAM U537	Cypress	CY7C1041DV33-10ZSXIT	input voltage:3.3V; ambient temperature with power applied:-55~125°C	IEC 62109-1	Test in unit

**Constructional Data Form (CDF) for Electrical Appliances**

Fan	NMB	06025SA-12Q-BT-D1	rated voltage:12V; maximum input power:3.12W; ambient temperature(operating): -10~75°C	IEC 60950-1:2005/AMD2:2013 DIN EN 60950-1 (VDE 0805-1):2014-08	VDE(1507300)
PCB coating	Lackwerke Peters GmbH + Co KG	PETER SL1301ECO-BA-FLZ/20	best flame class V-0; temperatunre range:-40~140°C; CTI>600	ANSI/UL 94	E80315
PCB material	SHENGYI TECHNOLOGY CO LTD	S1135G	flammability: UL94 V-0; operating temperature:130°C	ANSI/UL 94;ANSI/UL 746	E109769
Heat shrink tubing	WOER	UL35-H/UL06-H	rated voltage:600V; temperature:-55~125°C; flammability:VW-1	ANSI/UL 224	E203950
Potting material of boost and INV choke	SILPRO ( SHANGHAI) CHEMICAL CO.,LTD	EP5201	UL94V-0; -50°C-200°C CTI:0	ANSI/UL 746	E358147
Insulator paper under the IGBT	Bergquist	Sil-pad K10	flammability:UL94V-0; operating temperature: -60~180°C;	ANSI/UL 94;ANSI/UL 746	E59150
Glue for fixing components and solder pads of lead wirings terminated on PCB	GUANGZHOU HUITIAN NEW MATERIAL CO LTD	9661E	Flammability:UL94 V-0; operating temperature:-60°C-200°C	ANSI/UL 94;ANSI/UL 746	E306078
transformer N200	KASCHKE COMPONENTS GMBH	04-030225	operating temperature:-25 to 85°C; external clearance:7.5mm; external creepage:10.0mm	UL 1446	E242005
Optocouplers	AVAGO TECHNOLOGIES PTE LTD	HCNW-138	operating temperature:-40 to 85°C; external clearance:9.6mm; external creepage:10.0mm	DIN EN 60747-5-5 (VDE 0884-5):2011-11; EN 60747-5-5:2011	VDE 40009376
Ethernet isolation transformer N1900	XFMRS INC	XFATM9ULR1	Isolation insulation:6000 Vrms(CHIP to LINE); flammability:UL94V-0; operating temperature range:-55 to 85°C;	UL 60950	E165866

Note(s): An asterisk indicates a mark that assures the agreed level of surveillance.