

Delivering leading edge, innovative power solutions for more than **30** years....

Model:GTM961800PWWWV.V-T3

November 28, 2020

## 180W AC DC Adapter, Desktop Power Supply, for ICT/ITE, Medical, and Household use, 3 Prong Input (C14)

### Information

Model Number	GTM961800PWWWV.V-T3
Description	GTM961800PWWWV.V-T3, Medical/ITE/Household use Power Supply, 60601-1-4th Ed. , Desktop/External, Regulated Switchmode AC-DC Power Supply AC Adaptor, , Input Rating: 100-240V~, 50-60Hz, IEC 60320/C14 AC Inlet Connector, Class I, Earth Ground, Output Rating: 180 Watts, Power rating with convection cooling (W) , 12-54V in 0.1V increments, Approvals: cETLus 60601-1-11; cETLus 60950-1; cETLus 60601-1 3rd; CB 60601-1-11; CB 60601-1; cETLus; S-Mark IEC/EN 60601-1; WEEE; Ukraine; PSE; VCCI; Level VI; China RoHS; CE; EAC; Class I; RoHS; CB 60950; CB 60335; CCC; CB 62368; S-Mark 60950; ETL 62368; Morocco; IP41; RCM;

### Model Picture



Agency Documents	<a href="http://www.globtek.info/certs/GTM961800P/">http://www.globtek.info/certs/GTM961800P/</a>
CE EC-Declaration	<a href="https://www.globtek.com/pdf/ec_declaration/a000c00000Old6SEAR">https://www.globtek.com/pdf/ec_declaration/a000c00000Old6SEAR</a>
RoHS/RoHS2 Declaration	<a href="https://www.globtek.com/pdf/rohs_cert/a000c00000Old6SEAR">https://www.globtek.com/pdf/rohs_cert/a000c00000Old6SEAR</a>
REACH Declaration	<a href="https://www.globtek.com/pdf/iso_certificates/REACH.pdf">https://www.globtek.com/pdf/iso_certificates/REACH.pdf</a>
Conflict Minerals Declaration	<a href="https://www.globtek.com/pdf/conflict-minerals.pdf">https://www.globtek.com/pdf/conflict-minerals.pdf</a>

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**MODEL PARAMETERS**

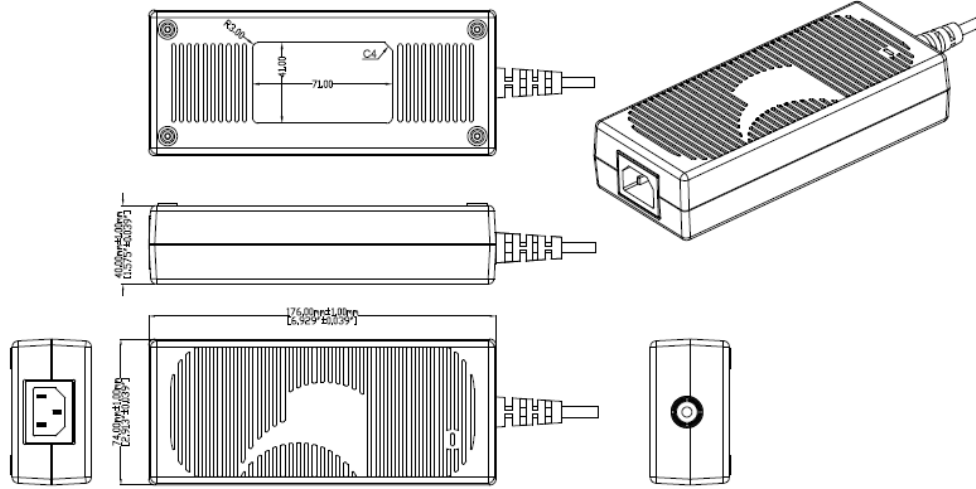
Type	Desktop/External
Technology	Regulated Switchmode AC-DC Power Supply AC Adaptor
Category	Medical/ITE/Household use Power Supply
Input Voltage	100-240V~, 50-60Hz
I/P Amps (A)	2.2A
Wattage (W)	180.0
Vout Range (V)	12-54
Efficiency Level	USA DOE Level VI / Eco-design Directive 2009/125/EC, (EU) 2019/1782
Ingress Protection	IP41
Size (mm)	176.5*74*40

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# ENCLOSURE



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**RATING TABLE**

Model Number	Voltage	Amps(A)	Watts(W)	RFQ
GTM961800P16012-T3	12 V	13.33	159.96	<a href="#">RFQ</a>
GTM961800P16012-T3-CF	12 V	13.33	159.96	<a href="#">RFQ</a>
GTM961800P16013.5-T3	13.5 V	11.85	159.98	<a href="#">RFQ</a>
GTM961800P17015-T3-CF	15 V	11.33	169.95	<a href="#">RFQ</a>
GTM961800P17015-T3	15 V	11.33	169.95	<a href="#">RFQ</a>
GTM961800P17018-T3	18 V	9.44	169.92	<a href="#">RFQ</a>
GTM961800P17018-T3-CF	18 V	9.44	169.92	<a href="#">RFQ</a>
GTM961800P18020-T3	20 V	9	180.00	<a href="#">RFQ</a>
GTM961800P18020-T3-CF	20 V	9	180.00	<a href="#">RFQ</a>
GTM961800P18024-T3	24 V	7.5	180.00	<a href="#">RFQ</a>
GTM961800P18024-T3-CF	24 V	7.5	180.00	<a href="#">RFQ</a>
GTM961800P17024-T3	24 V	7.08	169.92	<a href="#">RFQ</a>
GTM961800P18028-T3	28 V	6.42	179.76	<a href="#">RFQ</a>
GTM961800P18028-T3-CF	28 V	6.42	179.76	<a href="#">RFQ</a>
GTM961800P18030-T3-CF	30 V	6	180.00	<a href="#">RFQ</a>
GTM961800P18030-T3	30 V	6	180.00	<a href="#">RFQ</a>
GTM961800P18036-T3	36 V	5	180.00	<a href="#">RFQ</a>
GTM961800P18036-T3-CF	36 V	5	180.00	<a href="#">RFQ</a>
GTM961800P18048-T3-CF	48 V	3.75	180.00	<a href="#">RFQ</a>
GTM961800P18048-T3	48 V	3.75	180.00	<a href="#">RFQ</a>
GTM961800P18054-T3	54 V	3.333	179.98	<a href="#">RFQ</a>
GTM961800P18054-T3-CF	54 V	3.333	179.98	<a href="#">RFQ</a>

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## SPECIFICATIONS

### Input

Input Voltage:	Specified: 90-264VAC, Nameplate: 100-240VAC 100% rated load current for 90-264VAC 90% rated load current for 85-264VAC
Input Frequency:	Specified: 47-63Hz, Nameplate: 50-60Hz
Power Factor:	0.90 (min.) @ 230VAC, 0.97 (min.) @ 115VAC
No Load Input Power:	<150mW @ 230VAC (EU CoC Tier 2 compliant)
Inrush Current:	30A/60A max. (cold start @ 115V/230VAC)
Efficiency:	DoE Level VI and EU CoC Tier 2 compliant

### Output

Turn-on Delay:	1 second typ. @ 115VAC and full load
Output Regulation:	± 4% (measured at output connector)
Line Regulation:	± 0.5% typ. (measured at output connector, full load)
Ripple:	1% or 200mV, whichever is greater (using a 47µF low-ESR cap + 0.1µF ceramic capacitor, measured @ 20MHz BW, at output connector)
Turn-On Overshoot:	5% max.
Transient Response:	5% max. deviation, 1ms recovery time (with 25% to 50% load step)
Hold-up Time:	20ms min.
Switching Frequency:	25 - 125KHz, depending on model and load condition
Power Indicator:	Green LED

### Protections

Input Protection:	MOV transient suppressor, dual input line fusing
Over-Current Protection:	105 - 140% of rated output current, auto-restart
Short-Circuit Protection:	Auto-restart
Over-Voltage Protection:	110 - 135% (60V max. for output voltage ≥ 45V), latched off, cycle AC to reset

### Environmental

MTBF:	1,500,000 hours @ 25°C ambient, full load (Telcordia SR-332, Issue 3)
Operating Temperature:	-10°C to 40°C (full load)
Storage Temperature:	-30°C to 80°C
Humidity:	0% to 95% relative humidity, non-condensing
Altitude:	5000m
Cooling:	Convection

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RoHS:	Complies with EU 2011/65/EU and China SJ/T 11363-2006
Note 1:	Regarding operating temperature a. See below de-rating table for output power capability at alternate temperature b. Extended low-end temperature range available as a custom option

## Safety

Dielectric Withstand Voltage:	4000VAC or 5656VDC from input to output 3000VAC or 4242VDC from input to earth (Class I models only)
Touch Current:	Standard models (No suffix): Class I: 20µA max. Class II: 70µA max. Class II with Functional Earth (F2): 20µA max.  Low-leakage models (-CF suffix): Class II with Functional Earth (F2): 10µA max.
Note 2:	Standard models are designed for use in Type-B/BF medical applications. Low-leakage models are designed for use in Type-CF medical applications. (See IEC60601-1, Clause 16.6.1)
Earth Leakage Current	Class I: 300µA max. Class II: N/A
Means of Protection:	2 x MOPP
Output Isolation Options:	Class I: C6 or C14 inlet (output negative tied to Earth contact) Class II: C8 or C18 inlet Class II FE: C6 or C14 inlet (output isolated from Earth contact) Review isolation options by reading our white paper <a href="#">PSU Isolation and Identity</a> .
Earth Continuity Test:	< 0.1Ω between earth pin (on AC inlet) and PCB termination point (Class I models only)
Compliant Standards:	See listing at end of this datasheet for specific standards

## EMC

Applicable Standards:	Medical: EN60601-1-2, 4th edition Emissions: EN55032, EN61000-6-3, EN61000-6-4, CISPR11, CISPR22 Immunity: EN55024, EN61000-6-1, EN61000-6-2
Conducted Emissions:	Class B, FCC Part 15, Class B (with resistive load)
Radiated Emissions:	Class B, FCC Part 15, Class B (with resistive load)
Harmonic Current Voltage Distortion:	EN61000-3-2, Class A
Voltage Fluctuations/Flicker:	EN61000-3-3
Electrostatic Discharge (ESD) Immunity:	EN61000-4-2, 10KV contact discharge, 18KV air discharge
Radiated RF Immunity:	EN61000-4-3, 10V/m 80-2700MHz, 80% 1KHz AM
EFT/Burst Immunity:	EN61000-4-4, 4KV/100kHz.
Line Surge Immunity:	EN61000-4-5, 2KV differential, 4KV common-mode
Conducted RF Immunity:	EN61000-4-6, 3VRMS, 80% 1KHz AM
Power Frequency Magnetic Field Immunity:	EN61000-4-8, 3A/m

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Voltage Dip Immunity:	EN61000-4-11
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## Enclosure

Material/Construction:	High impact plastic, 94V0 polycarbonate, non-vented
Size:	176.5 * 74.0 * 40.0mm (±1.0mm)
AC Input Mechanical Options:	Desktop: C6, C7, C14, or C18 inlet
Markings:	Label and/or pad printed and/or laser-etched into case

## Special Options

1. Custom cordsets, cord types, and connector types
2. Custom markings
3. Custom housing and cordset colors
4. Constant current/constant voltage (CC/CV) output behavior, with compliance voltage between (75% \* Vout) and (100% \* Vout)
5. Short term output surge power capability, for motor applications and short term intermittent high power applications. (Up to 300W for 1 second.)
6. IEC61000-3-2 Class C line harmonics for LED lighting applications
7. "Back EMF" upgrade, for motor loads and other high inductance applications with reverse energy flow requirements
8. Reduced touch/leakage current for IEC60601-1 Type-CF applications. (Available in models with -CF suffix.)
9. High reliability PCB laminate with plated through-holes for IPC610 Class 2 compliance
10. Tightened output voltage tolerance
11. Reduced output ripple level
12. Reduced output power rating
13. Improved ingress protection (IP) rating

## Output Connectors

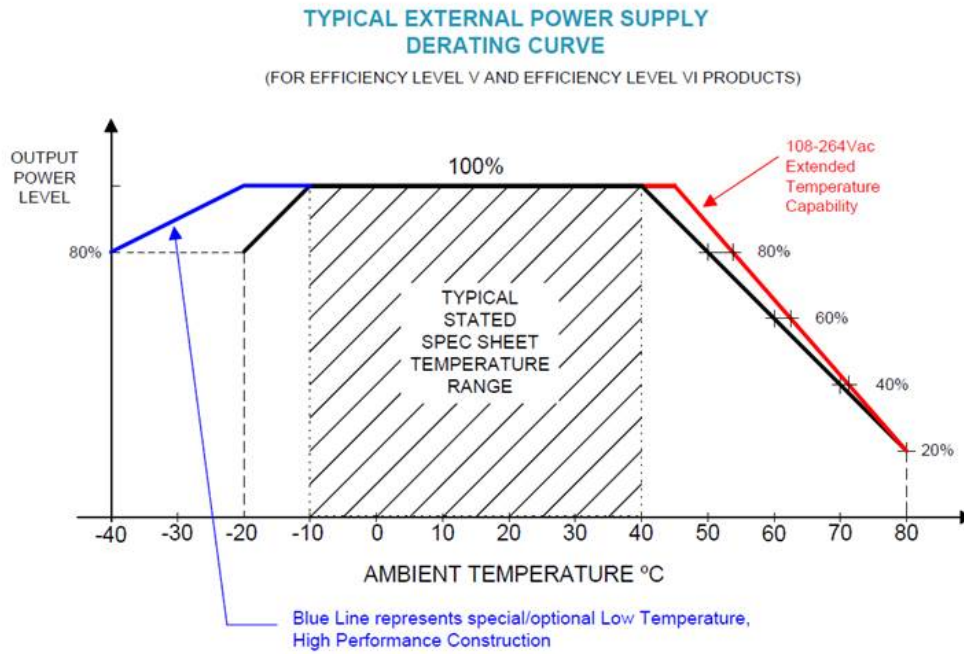
- Several output connector options are available with various output current ratings. GlobTek can supply 10A rated 2.1mm and 2.5mm style DC Power Jacks, to complement our 10A output rated 2.1mm and 2.5mm DC power plugs used on our output cordsets.
- Please visit our real-time listing of mating connector product offering:  
<https://en.globtek.com/news/high-current-coaxial-barrel-plug-jacks-for-high-wattage-power-supplies>

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## DERATING CURVE



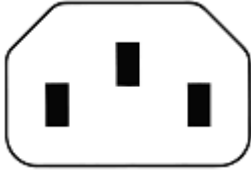


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**INPUT CONFIGURATION**

 Description IEC 60320/C14 AC Inlet Connector, Class I, Earth Ground


Mates with IEC 60320/C13 Plug

Optional Locking IEC60320 Receptacle and cord option available on some models by request.:


[Standard International IEC 320/C13 Cordsets](#)

Below are standard cordsets which are "not included" (unless stated above); these can be purchased separately or packaged with the power supply. Contact your Sales Engineer if the style required is not shown below. Many more available in different lengths, colors or cable material.

**Stock Power Supply Cords**

Part Number/ Link	Country	Plug	Termination	Length (mm)	(Ft)
<a href="#">3021457F701(R)</a>	N. American (Type B)	NEMA 5-15P	IEC 320/C13	2150	7
<a href="#">1191068F0701(R)</a>	N. American (Type B)	NEMA 5-15P Hospital	IEC 320/C13	2459	8
<a href="#">2194272M5701-T(R)</a>	Argentina (Type I)	IRAM 2073	IEC 320/C13	2500	8
<a href="#">5502022M5701A(R)</a>	Australian (Type I)	AS3112 / 3 PRONG	IEC 320/C13	2500	8
<a href="#">204B4272M5701(R)</a>	Brazil (Type N)	BRAZIL	IEC 320/C13	2500	8
<a href="#">6023602M5701(R)</a>	China (Type I)	CCC GR2099	IEC 320/C13	2500	8
<a href="#">G8014272M5701(R)</a>	Danish (Type K)	AFSNIT SECTION 107-2-D1	IEC 320/C13	2500	8
<a href="#">23144272M5701-T(R)</a>	Europe (Type E)	CEE 7/7	IEC 320/C13	2500	8
<a href="#">205IN4272M5701(R)</a>	India (Type D)	India IS 1293 (also known as IA16A3 or BS546)	IEC 320/C13	2500	8
<a href="#">208IN4272M5701(R)</a>	India (Type M)	India IS 1293 (also known as IA16A3 or BS546)	IEC320/C13	2500	8
<a href="#">377C4272M5701(R)</a>	Israel (Type H)	ISL 377C	IEC 320/C13	2500	8
<a href="#">23024272M5701(R)</a>	Italy (Type L)	CEI 23-16/VII	IEC 320/C13	2500	8
<a href="#">3003339F701(R)</a> [3x1.25mm2]	Japan (Type B)	JIS 8303 / 3 PINS	IEC 320/C13	2500	8

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<a href="#">3003068F2701-HK(R)</a> [3 x 2.0mm2]					
<a href="#">302J115J6F0701J(R)</a>	Japan / North America (Type B – 12A)	JIS 8303 / 3 PINS and NEMA 5-15P (PSE and UL/CUL appr)	IEC 320/C13	1830	6
<a href="#">302J104J6F0701J(R)</a>	Japan / North America (Type B – 15A)	JIS 8303 / 3 PINS and NEMA 5-15P (PSE and UL/CUL appr)	IEC 320/C13	1830	6
<a href="#">2313K3432M5701(R)</a>	Korea (Type F)	KS C 8305	IEC 320/C13	2500	8
<a href="#">5804272M5701(R)</a>	Russia (Type F)	GOST 7396	IEC 320/C13	2500	8
<a href="#">2084272M5701(R)</a>	South Africa (Type M)	South Africa SABS164-1 (16A type)	IEC 320/C13	2500	8
<a href="#">23214272M5701(R)</a>	Switzerland (Type J)	SEV 1011	IEC 320/C13	2500	8
<a href="#">3003322M5701(R)</a>	Taiwan (Type B)	BSMI	IEC 320/C13	2500	8
<a href="#">PZ0800100-2M5BK13H(R)</a>	UK, Hong Kong, Singapore, Gulf States (Type G)	BS 1363A	IEC 320/C13	2500	8
<a href="#">7055002M5701A(R)</a>	International	IEC 320 C14-C13	IEC 320/C13	2500	8

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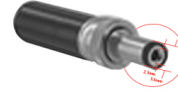
**OUTPUT CONFIGURATION**

Common output connector options:


 L Type (Coaxial  
5.5x2.5mm plug)

 C Type (Coaxial  
5.5x2.1mm plug)

 K Type (Coaxial  
3.5x1.3mm plug)

 LL Type (5.5x2.5mm  
Locking 760k type)

 CL Type (5.5x2.1mm  
Locking S761k type)

 ML2 Type (Molex  
housing 43025-0200)

 YL3 Type  
(KPPX-3P)


YL4 Type (KPPX-4P)


 EJ1/2/3/4/5 (EIAJ  
RC-5320A type  
connectors)

 MSB Type (Micro  
USB)

 USBC Type (USB  
Type C)

 Inquire for custom  
design

 For a comprehensive list of options, [click here](#)





Contact GlobTek for your specific requirements or custom solutions.

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## Approvals

Logo	Description
No Logo Applicable	IEC 60601-1-11:2015
No Logo Applicable	IEC 60601-1: 2005 + C1 + C2 + A1
No Logo Applicable	CB for 60335-1:2010/COR1:2010/COR2:2010 /AMD1:2013/COR1:2014/AMD2:2016/COR1:2016
No Logo Applicable	IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013
No Logo Applicable	CB for IEC 62368-1:2014 (Second Edition)
	CCC Altitude up to 5000 m GB17625.1-2012, GB4943.1-2011, GB/T9254-2008
	CE Certification
	Audio/Video, Information And Communication Technology Equipment - Part 1: Safety Requirements [UL 62368-1:2014 Ed.2] Audio/Video, Information And Communication Technology Equipment - Part 1: Safety Requirements [CSA C22.2#62368-1:2014 Ed.2]
	cETLus-Cert-4007497 ANSI/AAMI ES60601-1:2005 with AMD C1: 2009, AMD C2: 2010 and CAN/CSA-C22.2 No. 60601-1 2008 with COR 2:2011+ANSI/AAMI HA60601-1-11 Ed:1
	cETLus-Cert-60950-1 4007497 Listed

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	CHINA SJ/T 11364-2014, China RoHS Chart: <a href="http://en.globtek.com/globtek-rohs.php">http://en.globtek.com/globtek-rohs.php</a>
Conforms to AAMI STD.ES60601-1,IEC 60601-1-11 Certified to CAN/CSA STD.C22.2 NO.60601-1	Conforms to AAMI STD.ES60601-1,IEC 60601-1-11 Certified to CAN/CSA STD.C22.2 NO.60601-1
Conforms to UL STD. 60950-1 Certified to CSA STD C22.2 NO.60950-1	Conforms to UL STD. 60950-1 Certified to CSA STD C22.2 NO.60950-1
	Declaration ДС № EAЭC N RU Д-US.KA01.B.10453_19 Custom Union of Russia, Belarus and Kazakhstan <a href="http://www.globtek.com/redirect/?loc=gost-certificate-eac-declaration">http://www.globtek.com/redirect/?loc=gost-certificate-eac-declaration</a>
	Indoor Use Only - Mark is on the label or Molded in the case
IP41	Ingress Protection: ?IP41 to IEC60529:2001 Protection against granular foreign bodies - Protected against vertically falling drops of water
 Glob Tek, Inc.	JAPAN TUV R-PSE, Cert. No. JD 50314327, to J60950-1(H26) , J55022(H22),J3000(H25)[15V or less]. Please reference the following website for guidelines on PSE regulations: <a href="http://en.globtek.com/importing-ite-and-medical-power-supplies-ac-adaptors-to-japan/">http://en.globtek.com/importing-ite-and-medical-power-supplies-ac-adaptors-to-japan/</a>
EFFICIENCY LEVEL 	Efficiency: complies to section 301 of Energy Independence and Security Act (EISA) complies with Energy Star tier 2 (North America), ECP tier 2 (China), MEPS tier 2 (Australia), Code of Conduct (Europe)
	Morocco SDoC declaration <a href="http://www.globtek.info/certs/Morocco%20SDoC%20Declaration/">http://www.globtek.info/certs/Morocco%20SDoC%20Declaration/</a>
	RCM certificate SAA-200456-EA; Australia and New Zealand Regulatory Compliance, Mark ( <a href="http://rcm.standards.org.au/rcmfaq/rcmfaq.htm">http://rcm.standards.org.au/rcmfaq/rcmfaq.htm</a> )
RoHS	Specifications of directive 2011/65/EU Annex VI (ROHS-2) with amendment 2015/863-EU (ROHS-3) <a href="http://www.ce-mark.com/Rohs%20final.pdf">http://www.ce-mark.com/Rohs%20final.pdf</a>

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 Intertek	EN 60601-1:2006 + A1:2013 + A12:2014 EN 60601-1-11:2015
 Intertek	S-Mark Certificate EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011+A2:2013 ( <a href="http://www.intertek.com/marks/s/">http://www.intertek.com/marks/s/</a> )
	UKCA Certification
 10276	Ukraine UKRSepr (Document: <a href="http://www.globtek.com/html/iso_certificates/GT_Ukraine.pdf">www.globtek.com/html/iso_certificates/GT_Ukraine.pdf</a> )
	Japan: Voluntary Control Council for Interference (VCCI)
	WEEE: Complies with EU 2012/19/EU ( <a href="http://ec.europa.eu/environment/waste/wEEE/index_en.htm">http://ec.europa.eu/environment/waste/wEEE/index_en.htm</a> ) Mark is on the label or Molded in the case