VDE Prüf- und Zertifizierungsinstitut

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Cypress Semiconductor Corporation
Mr. Sachin Gupta
198 Champion Ct.
SAN JOSE CA 95134
USA

Offenbach, 2012-10-10

Your ref.	Your letter	Our ref. - please indicate	Contact
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Translation: In any case the German version shall prevail

P R Ü F B E R I C H T
zur Information des Auftraggebers

Test Report for the Information of the applicant

Produkt / *Product*: **Component for washing machines and dishwashers**

Typ / *Type*: **Microcontr. for Home Appl. Autom. Controls**

dieser Prüfbericht enthält das Ergebnis einer einmaligen Untersuchung an dem zur Prüfung vorgelegten Erzeugnis. Ein Muster dieses Erzeugnisses wurde geprüft, um die Übereinstimmung mit den nachfolgend aufgeführten Normen bzw. Abschnitten von Normen festzustellen.
Die Prüfung wurde durchgeführt vom 2012-07-24 bis 2012-08-08.

This test report contains the result of a singular investigation carried out on the product submitted. A sample of this product was tested to found the accordance with the thereafter listed standards or clauses of standards resp. The testing was carried out from 2012-07-24 to 2012-08-08.

Der Prüfbericht berechtigt Sie nicht zur Benutzung eines Zertifizierungszeichens des VDE und berücksichtigt ausschließlich die Anforderungen der unten genannten Regelwerke.

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The test report does not entitle for the use of a VDE Certification Mark and considers solely the requirements of the specifications mentioned below.

Wenn gegenüber Dritten auf diesen Prüfbericht Bezug genommen wird, muss dieser Prüfbericht in voller Länge an gleicher Stelle verfügbar gemacht werden.

Whenever reference is made to this test report towards third party, this test report shall be made available on the very spot in full length.

I Beschreibung *Description*	• Software Selbstdiagnose-Bibiliothek für die CY8C22X45 Mikro-kontroller-Familie. • *SW selftest library for the* CY8C22X45 *microcontroller family.*	
II Standards	• IEC 60335-1:2010 (5 Edition) (incl. Corrigendum 1:2002) + A1:2004 + A2:2006 (incl. Corrigendum 1:2006) Annex R Table 11.12.7 and/or • EN 60335-1:2002 + A11:2004 + A1:2004 + A12:2006 + Cor.:2006 + A2:2006 + Cor.:2007-01 + Cor.:2007-02 + A13:2008 + Cor.:2009 +Cor.:2010 + A14:2010 + A15:2011 Annex R • EN 60730-1: 2009 Annex H Table 11.12.7 • IEC 60730 Ed. 4.0: 2010-03 Annex H Table 11.12.7	
III Hersteller *Manufacturer*	• Cypress Semiconductor • 198 Champion Court, San Jose, CA 95134-1709	
IV Identifikation *Identification*	• CY8C22X45 Class B library V1.0 • CY8C28XXX Class B library V1.0	
	Measure	Reference
V Selbstdiagnose Funtionen Selftest functions ***Startup Library***	• Register test (read/write compare)	H 2.16.5
	• ROM Checksum test (16Bit Checksum)	H 2.19.3.1
	• Program counter - island jump test	H 2.16.5
	• RAM test (March C- / March C / March B)	H 2.19.6
	• Clock test (comparison / 2 clocks)	H 2.18.10.1
	• WD self test (source of last reset)	N/A
	• AD/DA Converter (partial coverage)*	H 2.18.13
	• Input / output periphery (partial coverage)*	H 2.18.13

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VI Selbstdiagnose Funtionen Selftest functions ***Runtime Library***	• Register test (read/write compare)	H 2.16.5
	• Stack test (special pattern)	N/A
	• Clock test (comparison / 2 clocks)	H 2.18.10.1
	• ROM Checksum test (16Bit Checksum /blockwise)	H 2.19.3.1
	• Programme counter (island / jump test)	H 2.16.5
	• Sliced RAM test (C- / C)	H 2.19.6
	• Input / output periphery (partial coverage)*	H 2.18.13
	• AD/DA Converter (partial coverage)*	H 2.18.13
	• Redundant inverse storage(example code)**	H 2.19.5
VII Benutzung *Usage*	• Die Module sind zur Einbindung in eine übergeordnetes Selbstdiagnoseprogramm vorgesehen, welches vom Hersteller der Steuerung zur Prüfung vorzulegen ist. • *The modules are intended to be included in a supervisory self diagnostic program which has to be presented for approval by the manufacturer of the electronic control.*	
VIII Ergebnis *Result*	• Die geprüften Module erfüllen die Anforderungen gemäß der unter II genannten Prüfbestimmungen. • Die Einbindung der Module ist in der jeweiligen Applikation zu prüfen. • *The tested modules fulfil the requirements according the test specifications referred in chapter II.* • *The implementation of the modules has to be tested in each application.*	
VIIII Fehlerabdeckung Diagnostic coverage	• Die Fehlerabdeckung entspricht den Anforderungen nach Tabelle • H 11.12.7 / Tabelle R1 (60335-1) / Tabelle H1 (60730-1) • The diagnostic coverage fulfils the requirements of • Table H 11.12.7 / Table R1 / Table H1 (60730-1)	

*=only partial coverage of EN/IEC 60335-1 / EN/IEC 60730-1 requirements.
**=additional coverage, not directly mentioned in EN/IEC 60335-1 / EN/IEC 60730-1.

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File Listing

File	Type	Version	MD5 CheckSum
Selftest.asm	Asm	1.0	A1BE971904123BA017F461ED0FC7A9E3 *selfTest.asm
CRC.asm	Asm	1.0	A20E831B19E57AB3845F381616ABAEBB *CRC.asm
Selftest_csd.asm	Asm	1.0	63000D1A27FA4CE44700E679EDC63641 *selftest_csd.asm
Selftest_sar_adc.asm	Asm	1.0	12FA8C15286F947AAC296BE92495E65B *selftest_sar_adc.asm
Selftest_pc.asm	Asm	1.0	CCCA035C2FB5C26BD4C2A057417A25ED *selftest_pc.asm
Selftest_clock.asm	Asm	1.0	BF099B105001FD2D0E66C2F1C0D3D8D3 *selftest_clock.asm
Selftest_ram_march_b.asm	Asm	1.0	83A0A3FC3B5D66322A3374D8042B85DF *selftest_ram_march_b.asm
Selftest_ram_march_c.asm	Asm	1.0	6AD0CBE30D08EF01F8FB298C63EC238B *selftest_ram_march_c.asm
Selftest_comparator.c	C	1.0	5C4AC0C70FA709272E337D1558A104B0 *selftest_comparator.c
SelfTest_StackOverflow.asm	Asm	1.0	C4BE7C0727BA3C56D7339C25EFD8C326 *selftest_stackoverflow.asm
Selftest_ram_march_c_periodic.c	C	1.0	89D290812854F5FBF63F107640583160 *selftest_ram_march_c_periodic.c
Selftest_ram_march_low_lvl.asm	ASM	1.0	F065B8E6F8B7BD001A11F104E5911D94 *selftest_ram_march_low_lvl.asm
SelfTest_WDT.c	C	1.0	9F7D68C07EEB6585B1E792F37E578F7F *selftest_wdt.c
Selftest_ram_rom.c	C	1.0	0984B6F75C6A70ECD2C0FD9083CD6D6F *selftest_ram_rom.c
Selftest_uart.c	C	1.0	62D514C5B7FCED3F446149E9411BAFE2 *selftest_uart.c
Selftest_spi.c	C	1.0	65109B8CC956AC8117FB492CAEA93655 *selftest_spi.c
Selftest_clock_hw.c	C	1.0	DECAA74971B9740BB5D897DD68A46B06 *selftest_clock_hw.c
Selftest.inc	Inc	1.0	3A3A7DE700C3EE2A5ABCAB58667FB9F5 *selftest.inc
CRC.inc	Inc	1.0	1212C6BF663B439B10DCF7B51BCCE047 *crc.inc
Selftest_sar_adc.inc	Inc	1.0	49CD6D4287EDC8093E8E60CE8FA79050 *selftest_sar_adc.inc
Selftest_pc.inc	Inc	1.0	A6968A50D134832CF35DA1314A25864E *selftest_pc.inc
Selftest_clock.inc	Inc	1.0	B491A93955BF83366C868A26271ED9DC *selftest_clock.inc
Selftest_ram_march_c.inc	Inc	1.0	A8241FD0EDA71675AFCD715EFA56F67C *selftest_ram_march_c.inc
SelfTest_StackOverflow.inc	Inc	1.0	E5F90543419708EB355386D8C40EFFC3 *selftest_stackoverflow.inc
Selftest_ram_march_c_periodic.h	H	1.0	8A37749FC531A125163D376905D3314F *selftest_ram_march_c_periodic.h
Selftest_ram_march_low_lvl.inc	Inc	1.0	8019138724080E4EDC09976CA323E8D6 *selftest_ram_march_low_lvl.h
Selftest.h	H	1.0	85459B746971BA57E2EC9ACDC7232329 *selfTest.h
CRC.h	H	1.0	13DE43B815075B63CC65B2D35A41D788 *crc.h
Selftest_csd.h	H	1.0	4E50F5EBAFD49681330DBF4C757E8AAB *selftest_csd.h
Selftest_sar_adc.h	H	1.0	D4203411B8A289A1736C837BFB445FB0 *selftest_sar_adc.h
Selftest_pc.h	H	1.0	25B9A7323ADCB8AA60F8E3A887D22BE8 *selftest_pc.h
Selftest_clock.h	H	1.0	E3F9AAA52CD2CBE5E212BD469744F2BF *selftest_clock.h
Selftest_ram_march_b.h	H	1.0	DC527F525E202D00AA43C4E1CA1BA280 *selftest_ram_march_b.h
Selftest_ram_march_c.h	H	1.0	5D348D832026ACBB3EFFC73EAF85F06D *selftest_ram_march_c.h
Selftest_comparator.h	H	1.0	D5A0830CF3DF4A5AA4670A558859D0C0 *selftest_comparator.h
SelfTest_StackOverflow.h	H	1.0	1B106593B1AD4207EFB9A1B42B89A438 *selftest_stackoverflow.h
SelfTest_WDT.h	H	1.0	2B1AF22C4C6E3197B6423B79AD6244DD *selftest_wdt.h
Selftest_ram_rom.h	H	1.0	5A0BC4D87443F5A3B6C2C11CA7276B2C *selftest_ram_rom.h
Selftest_uart.h	H	1.0	23404E9ECC7B34EDD776407829E16505 *selftest_uart.h
Selftest_spi.h	H	1.0	5F823FA1B0DFF6043DF525748695CD2A *selftest_spi.h
Selftest_clock_hw.h	H	1.0	19A1AB79A5E4453323F78084B6403745 *selftest_clock_hw.h

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Best regards

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Section FG23

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