



RoHS Certificate of Compliance

Yoctopuce hereby certifies that it has assessed the compliance of the product **YoctoHub-GSM-4G** (YHUBGSM5) with the requirements of European Directive 2011/65/UE with amendment 2015/863 according to the methodology recommended by the European Standard EN 50581:2012 "*Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances*", in conformity with Module A of Decision 768/2008/EC.

For each and every component used to build the **YoctoHub-GSM-4G**, Yoctopuce has obtained from the manufacturer a document that demonstrates the compliance with the directive. The quality and trustworthiness of the documents has been evaluated, and additional information has been requested in case of doubt on the thoroughness of the documents or on the manufacturer's knowledge of the directive. Wherever evidence was lacking, components have been replaced by similar components from other manufacturers compliant with the directive.

Based on the collected evidence, Yoctopuce certifies that the **YoctoHub-GSM-4G** is compliant with the restricted substance requirements of European Directive RoHS 2015/863, using the following exemptions:

- 6(c): Copper alloy containing up to 4% lead by weight
- 7(c)-I: Electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors

For all intents and purposes, the complete list of components and materials currently used is attached, with an indication of the directive version taken into account by the manufacturer, the type of the supporting document, and the list of exemptions required for each component. Whenever alternative components have been used in the past, variants are also listed separately. This document is therefore updated on a regular basis.

Yoctopuce keeps abreast of the legislative adaptations, in particular concerning the evolution of and the renewal of expiring exemptions. If need be, the products will be adapted according to the new standards.

Cartigny, 28 August 2020

Marc Vuilleumier Stükelberg
Partner



Exhaustive list of components and materials currently used to build the YoctoHub-GSM-4G

Component	Manufacturer	Type	Compliance	Exemptions	Evidence
ANT-LTE-MON-SMA	Linx Technologies	Antenne	RoHS 2015/863	-	Manufacturer Certificate of Compliance
CSI-SGFB-100-UFFR	Linx Technologies	Antenne	RoHS 2015/863	-	Manufacturer Certificate of Compliance
1909763-1	TE connectivity	Antenne	RoHS 2015/863	-	Manufacturer Certificate of Compliance
PIC24FJ256DA206-I/MR	Microchip	CPU	RoHS 2015/863	-	Manufacturer Material Declaration
06031C103JAT2A	AVX (Kyocera)	Cap	RoHS 2015/863	-	Manufacturer Certificate of Compliance
C0603C102K5RACTU	Kemet	Cap	RoHS 2015/863	-	Manufacturer Certificate of Compliance
CBR06C270F5GAC	Kemet	Cap	RoHS 2015/863	-	Manufacturer Certificate of Compliance
FC0V224ZFTBR24	Kemet	Cap	RoHS 2015/863	-	Manufacturer Certificate of Compliance
C1608X6S1A106M080AC	TDK	Cap	RoHS 2015/863	-	Manufacturer Certificate of Compliance
C2012X7R2E472K085AA	TDK	Cap	RoHS 2015/863	-	Manufacturer Certificate of Compliance
CGA3E2C0G1H120J	TDK	Cap	RoHS 2015/863	-	Manufacturer Certificate of Compliance
EMK107BB7225KA-T	Taiyo Yuden	Cap	RoHS 2015/863	-	Manufacturer Certificate of Compliance
LMK107B7105KA-T	Taiyo Yuden	Cap	RoHS 2015/863	-	Manufacturer Certificate of Compliance
LMK212BC6226MG-T	Taiyo Yuden	Cap	RoHS 2015/863	-	Manufacturer Certificate of Compliance
885_012_206_071	Würth Electronic	Cap	RoHS 2015/863	-	Manufacturer Certificate of Compliance
ZX62-B-5PA(33)	Hirose	Connecteur	RoHS 2015/863	-	Manufacturer Certificate of Compliance
47603-0001	Molex	Connecteur	RoHS 2015/863	-	Manufacturer Certificate of Compliance
90325-3010	Molex	Connecteur	RoHS 2015/863	-	Manufacturer Certificate of Compliance
653_005_114_822	Würth Electronic	Connecteur	RoHS 2015/863	-	Manufacturer Certificate of Compliance
691_210_910_002	Würth Electronic	Connecteur	RoHS 2015/863	6(c)	Analytical test results
FAN4010IL6X_F113	Fairchild (On Semiconductor)	Current_Sense	RoHS 2015/863	-	Manufacturer Certificate of Compliance
PCA9554ABS	NXP semiconductor	Digital	RoHS 2015/863	-	Manufacturer Material Declaration
IS25LP064A-JKLE-TR	ISSI	Eprom	RoHS 2015/863	-	Manufacturer Certificate of Compliance
SELECT-10	Kester	Flux	RoHS 2015/863	-	Analytical test results
MCP1703T-3302E/CB	Microchip	LDO	RoHS 2015/863	-	Manufacturer Material Declaration
TPS7A8300RGWVT	Texas Instruments	LDO	RoHS 2015/863	-	Manufacturer Certificate of Compliance
AA2214SURSK	Kingbright	LED-Rouge	RoHS 2015/863	-	Manufacturer Certificate of Compliance
AA2214ZGS	Kingbright	LED-Vert	RoHS 2015/863	-	Manufacturer Certificate of Compliance
AA2214QBS/D	Kingbright	LED-bleu	RoHS 2015/863	-	Manufacturer Certificate of Compliance
DMN67DBL-7	Diodes Incorporated	N-fet	RoHS 2015/863	-	Manufacturer Certificate of Compliance
SIA914ADJ-T1-GE3	Vishay	N-fet	RoHS 2015/863	-	Manufacturer Certificate of Compliance
SARA-R412M-02B	Ublox	Network	RoHS 2015/863	-	Manufacturer Certificate of Compliance
DMP3098L-7	Diodes Incorporated	P-fet	RoHS 2015/863	-	Manufacturer Certificate of Compliance
SIA421DJ-T1-GE3	Vishay	P-fet	RoHS 2015/863	-	Manufacturer Certificate of Compliance
SIA923AEDJ-T1-GE3	Vishay	P-fet	RoHS 2015/863	-	Manufacturer Certificate of Compliance
FR4-ENIG	TOM-IC	PCB	RoHS 2015/863	-	Manufacturer Certificate of Compliance
MCP7940NT-I	Microchip	RTC	RoHS 2015/863	-	Manufacturer Material Declaration
RK73H1JTTD4R70F	KOA speer electronics	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
CRCW0603820KFKEA	Vishay	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
AC0603FR-074K7L	Yageo	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
PE0603FRF470R1L	Yageo	Res	RoHS 2015/863	-	Manufacturer Certificate of Compliance
RC0603FR-070RL	Yageo	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
RC0603FR-07100KL	Yageo	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
RC0603FR-07100RL	Yageo	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
RC0603FR-0710KL	Yageo	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
RC0603FR-071K5L	Yageo	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
RC0603FR-071KL	Yageo	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
RC0603FR-071ML	Yageo	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
RC0603FR-0747KL	Yageo	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
RC0603FR-0749R9L	Yageo	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
RT0603BRD07470RL	Yageo	Res	RoHS 2015/863	-	Manufacturer Certificate of Compliance
04-7068-0000	Kester	SAC305 bar	RoHS 2015/863	-	Manufacturer Certificate of Compliance
24-7068-7603	Kester	SAC305 wire	RoHS 2015/863	-	Manufacturer Certificate of Compliance
BAT54CWT1G	ON Semiconductor	Schottky	RoHS 2015/863	-	Manufacturer Material Declaration
SB6N58-M500SI	KOKI	Solder paste	RoHS 2015/863	-	Manufacturer Certificate of Compliance
KMR211NGLFS	C&K Components	Switch	RoHS 2015/863	-	Manufacturer Certificate of Compliance
418_121_270_801	Würth Electronic	Switch	RoHS 2015/863	-	Analytical test results
SN74AVC4T774RGYR	Texas Instruments	bus_transceiver	RoHS 2015/863	-	Manufacturer Certificate of Compliance
ABS07-32.768KHZ-7-T	Abracon	quartz	RoHS 2015/863	-	Manufacturer Certificate of Compliance

Alternate components that may have been used in the past to build the YoctoHub-GSM-4G

Component	Manufacturer	Type	Compliance	Exemptions	Evidence
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C0603C106M9PACTU	Kemet	Cap	RoHS 2015/863	-	Manufacturer Certificate of Compliance
GRM188R60J105KA01D	Murata	Cap	RoHS 2011/65/UE	-	Manufacturer Certificate of Compliance
GRM188R61C225KE15D	Murata	Cap	RoHS 2011/65/UE	-	Manufacturer Certificate of Compliance
GRM188R71E104KA01D	Murata	Cap	RoHS 2011/65/UE	-	Manufacturer Certificate of Compliance
GRM21BR60J226ME39L	Murata	Cap	RoHS 2011/65/UE	-	Manufacturer Certificate of Compliance
GRT21BC81A226ME13L	Murata	Cap	RoHS 2011/65/UE	-	Manufacturer Certificate of Compliance
C2012X7R2E472KT5	TDK	Cap	RoHS 2015/863	-	Manufacturer Certificate of Compliance
EMK107BC6106MA-T	Taiyo Yuden	Cap	RoHS 2015/863	-	Manufacturer Certificate of Compliance
ZX62-B-5PA(11)	Hirose	Connecteur	RoHS 2011/65/UE	-	Compliance statement
S25FL164K0XNFI013	Cypress	Eprom	RoHS 2015/863	-	Manufacturer Certificate of Compliance
W25Q32JVZPIQ	Winbond	Eprom	RoHS 2015/863	-	Manufacturer Certificate of Compliance
TLSM1060(T18)	Toshiba	LED-Rouge	Yes, no details	-	Compliance statement
ASMT-TGBM-NT502	Avago (Broadcom)	LED-Vert	RoHS 2011/65/UE	-	Compliance statement
ASMT-TBBM-NP902	Avago (Broadcom)	LED-bleu	RoHS 2011/65/UE	-	Compliance statement
SIA914DJ-T1-GE3	Vishay	N-fet	RoHS 2015/863	-	Manufacturer Certificate of Compliance
SIA923EDJ-T1-GE3	Vishay	P-fet	RoHS 2015/863	-	Manufacturer Certificate of Compliance
RK73H1JTDD1501F	KOA speer electronics	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
RK73H1JTDD4702F	KOA speer electronics	Res	RoHS 2011/65/UE	7(c)-I	Manufacturer Certificate of Compliance
RK73H1JTDD49R9F	KOA speer electronics	Res	RoHS 2011/65/UE	7(c)-I	Manufacturer Certificate of Compliance
CRCW0603100KFKEA	Vishay	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
CRCW0603100KJNEA	Vishay	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
CRCW0603100RFKEA	Vishay	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
CRCW0603100RJNEB	Vishay	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
CRCW060310K0FKEA	Vishay	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
CRCW060310K0JNEB	Vishay	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
CRCW06031K00FKEA	Vishay	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
CRCW06031K00JNEB	Vishay	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
CRCW06031M00FKEA	Vishay	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
CRCW06031M00JNEB	Vishay	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
CRCW0603470RFKEA	Vishay	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
WSP0603R1000FEA	Vishay	Res	RoHS 2015/863	-	Manufacturer Certificate of Compliance
301-4.7K-RC	Xicon Passive Components	Res	Yes, no details	7(c)-I	Compliance statement
RC0603FR-074K7L	Yageo	Res	RoHS 2015/863	7(c)-I	Manufacturer Certificate of Compliance
BAT54C	Fairchild (On Semiconductor)	Schottky	RoHS 2015/863	-	Manufacturer Certificate of Compliance