

26 RUE DU BOCAGE CS 20660 ST PHILBERT DE BOUAINE 85607 MONTAIGU CEDEX TÉI : +33 (0) 25 1 41 91 35 Fax : +33 (0) 251 41 94 27

Designation: RESP. ARTIFICIEL V3.1

Customer : TRONICO

Date: 28/05/2020 Revision: 02

Verified by : pboiziau

Author by : vlecunff

Signature :

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Customer Reference : 099 SAC

Reference: 1781LC001

Soudure :

Le	vel	Reference designator	ID_RnD	Item Code	Description			Overtity	Commentary
1 2	3 4				Short Description	Long Description	Manufacturer & Part Number	Quantity	Commentary
*		C1-C6,C8,C11- C17,C23,C24,C30- C32,C36,C41,C44,C45,C49,C 58,C60- C62,C66,C69,C71,C72,C74,C 76-C81,C88-C90,C92- C97,C105,C107,C127,C128,C	23U00036	00280К676А	COND_CERAM CMS 0603 X7R	100nF 50V 10% -55°C/+125°C	AVX 06035C104KAT2A	55	
*		C7,C35,C47,C56,C59,C70,C8 3,C91,C106,C111- C113,C141,C143	23U00347	00280K522A	COND_CERAM CMS 0603 X5R	1uF 50V 10% -55°C/+85°C	TDK CGA3E3X5R1H105K080AB	14	
*		C9	23U00388	00280K526A	COND_CERAM CMS 0603 C0G	470pF 50V 5% -55°C/+125°C	KEMET C0603C471J5GACTU	1	
*		C10,C34,C64,C65,C73,C85,C 130						NC	
*		C18,C98,C140	21U00041	002504131A	COND_ALUM CMS D:6.3mm	47uF 50V 20% 680mR -55°C/+105°C	PANASONIC EEEFT1H470AP	3	
*		C19,C25,C26,C37- C40,C63,C99	23U00488	00280K521A	COND_CERAM CMS 1206 X5R	10uF 50V 10% -55°C/+85°C	MURATA GRM31CR61H106KA12L	9	
*		C20,C53	21U00015	002504142A	COND_ALUM CMS D:10mm	100uF +50V 20% 28mR -55°C/+105°C	PANASONIC EEHZA1H101P	2	
*		C21,C22,C27-C29,C33,C67						NC	
*		C42						NC	
*		C43						NC	
*		C46						NC	
*		C48,C54						NC	
*		C50	23U00055		_	6.8pF 50V 0.25pF -55°C/+125°C	KEMET C0603C689C5GACTU	1	
*		C51	23U00490	00280K523A		4.7nF 50V 5% -55°C/+125°C	KEMET C0603C472J5RACTU	1	
*		C52,C68	23U00104	00280K634A	COND_CERAM CMS 0603 X7R	10nF 50V 10% -55°C/+125°C	KEMET C0603C103K5RACTU	2	
*		C55,C57,C122,C123 C82,C124	23U00046 23U00282	00280K636A 00280K682A	COND_CERAM CMS 0603 C0G COND_CERAM CMS 0603 X5R	22pF 50V 10% -55°C/+125°C 4.7uF 25V 10% -55°C/+85°C	KEMET C0603C220K5GACTU	2	
*		C82,C124 C86	23000282	UUZ8UND8ZA	COND_CERAIVI CIVIS UOUS XSR	4./ur 23V 1U% -33 C/+83 C	MURATA GRM188R61E475KE15D	NC NC	
*		C100-C104,C114	23U00492	00280K635A	COND CERAM CMS 1206 X5R	22μF 25V 20% -55°C/+85°C	MURATA GRT31CR61E226ME01L	6	
*		C109,C110	23U00059	00280K681A	COND CERAM CMS 0603 X7R	22nF 16V 10% -55°C/+125°C	KEMET C0603C223K4RACTU	2	
*		C134	23U00494	00280K642A	COND_CERAM CMS 0402 COG HF	·	KEMET CBR04C560F1GAC	1	
*		C135,C136						NC	
*		C139						NC	

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	2 3 4	Reference designator			Short Description		Manufacturar & Part Number	Quantity	Commentary
*	2 3 4	CI1	I1U00004	00590G851A	Short Description CIRCUIT IMPRIME RESP. ARTIFICIEL V3.1	1781CI001	Manufacturer & Part Number SPECIF 1781PCB0001_05 PLAN 1781CI001 IND05 GERBERS 1781GER001 IND05 PANNEAU PAN099MAKR694 IND00	1	
*		D1,D4	E1U00030	004109304A	DIODE_LED VERTE CMS 0805	520 78mW 3.4V 20mA -40°C/+85°C - 40°C/+85°C	AVAGO HSMQ-C170	2	
*		D2	E1U00031	004109305A	DIODE_LED ROUGE CMS 0805	637 60mW 2.4V 25mA -40°C/+85°C - 40°C/+85°C	AVAGO HSMC-C170	1	
*		D3	E1U00032	004109306A	DIODE_LED JAUNE CMS 0805	591 85mcd 2.05V 20mA -40°C/+85°C - 40°C/+90°C	Everlight Electronics EAST2012YA2	1	
*		D5,D6,D8,D10-D12,D16- D19,D21,D30-D33,D36-D41	33U00013	00415E364A	DIODE_DE_SIGNAL CMS SOT23	30V 200mA -55°C/+150°C -55°C/+150°C	FAIRCHILD BAT54	21	
*		D7						NC	
*		D9	39U00073	004109287A-RD	DIODE_SCHOTTKY CMS SMB	40V 3A SINGLE -40°C/+105°C - 65°C/+150°C	ST MICROELECTRONICS STPS340U	1	
*		D13	38U00032	00415E388A	DIODE_ESD CMS SOT23-6L UNI	15kV DUAL -40°C/+125°C -55°C/+150°C	ST MICROELECTRONICS USBLC6-2SC6	1	
*		D14,D15,D20	E1U00022	00415E387A	DIODE_LED VERTE CMS 0402	574nm 3.5mcd 1.9V 2mA -40°C/+85°C - 40°C/+85°C	KINGBRIGHT APHHS1005LCGCK	3	
*		D22-D29	33U00002	00415E389A	DIODE_DE_SIGNAL CMS SOT23	85V 200mA -55°C/+150°C -55°C/+150°C	FAIRCHILD BAS16	8	
*		D34	38U00011	00415E415A	DIODE_ESD CMS SOT553 UNI	8kV 0.9V-5.5V DUAL -40°C/+85°C - 65°C/+150°C	TEXAS INSTRUMENTS TPD2E001DRLR	1	
*		D42	36U00007	00415E363A	DIODE_TRANSIL CMS DO-214AB BI	33V 1500W -55°C/+150°C -55°C/+150°C	FAIRCHILD SMCJ33CA	1	
*		ET1	G1U00004	-	ETIQUETTE IDENTIFICATION	1781ET001	PLAN 1781ET001 IND01	1	
k	k	-	-	CONSOM1071	ETIQU ETIQU POLYIMIDE AMBRE MAT		BRADY THT-46-724-10	1	
*		F1	86U00021	00555A448A	FUSIBLE REARMABLE CMS 0603	500mA 6V THERM -40°C/+85°C	BOURNS MF-FSMF050X	1	
*		J1,J3	ABU00030	005169144A	BARRETTE MALE CMS 6PTS	DROIT SN P:2.54mm -55°C/+105°C	SAMTEC TSM-106-01-T-SV-P-TR	2	
*		J2,J24	A7U00249	005169160A	CONNECT USB CMS 5PTS		HIROSE ZX62D-B-5PA8(30)	2	
*		J4	A7U00321	005169147A	CONNECT Micro Match CMS 12PTS	EMBASE RECT FEM DROIT	TE CONNECTIVITY 1-188275-2	1	
*		J5	A7U00305	005169145A	CONNECT MICRO-FIT CMS 2x6PTS	EMBASE RECT MALE DROIT -40°C/+105°C -40°C/+105°C	MOLEX 43045-1218	1	



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1 2	3 4			nem oode	Short Description	Long Description	Manufacturer & Part Number	Qualitity	Commentary
*		J6,J7						NC	
*		18	A7U00323	005169124A	CONNECT C-Grid CMS 2x3PTS	EMBASE RECT MALE DROIT -40°C/+105°C	MOLEX 0015912060	1	
*		J9	A7U00339	005169170A	CONNECT PCB HEADER CMS 4PTS	EMBASE RECT MALE DROIT -25°C/+85°C	JST B4B-PH-SM4-TB(LF)(SN)	1	
*		J10						NC	
*		J22	A7U00320	005169159A	BARRETTE MALE CMS 5PTS	DROIT SN P:2.54mm -55°C/+105°C	SAMTEC TSM-105-01-T-SV	1	
*		J26						NC	
*		J27	A7U00330	005169149A	CONNECT CMS 2x20PTS	EMBASE RECT MALE DROIT -40°C/+105°C	CNC TECH 3020-40-0300-00	1	
*		J28	A7U00327	005169148A	CONNECT SL CMS 5PTS	EMBASE RECT MALE DROIT -40°C/+105°C	MOLEX 74099-1005	1	
*		L1						NC	
*		L3	42U00158	003115800A	SELF CMS 1040	15uH 20% 8.5A -40°C/+125°C	WURTH ELEKTRONIK 74437368150	1	
*		L4	48U00023	003115846A	SELF_MODE_COMMUN CMS 1206TS	90R 25% 370mA 50V -40°C/+125°C	PULSE ELECTRONICS PE- 1206CCMC900STS	1	
*		L5,L6	43U00020	003115845A	FERRITES CMS 0603	600R 100MHz 200mA -55°C/+125°C - 20°C/+60°C	WURTH ELEKTRONIK 74279265	2	
*		L7	42U00090	003115847A	SELF CMS 0603	120nH 5% 300mA -40°C/+85°C	KEMET L0603CR12JRMST	1	
*		L8,L12	43U00016	003115836A	FERRITES CMS 0603	220R 100MHz 2.5A -55°C/+125°C - 55°C/+125°C	MURATA BLM18SG221TN1D	2	
*		L10						NC	
*		L11,L13,L16	42U00140	003115837A	SELF CMS 5.2x5.7x1.8mm	10μH 20% 3.4A -40°C/+150°C - 40°C/+150°C	BOURNS SRP5020TA-100M	3	
*		P1						NC	
*		Q1,Q2,Q4-Q8	92U00012	004234241A	TRANSISTOR_MOS CMS SOT23	CANAL N 60V 0.36A -55°C/+150°C - 65°C/+150°C	NEXPERIA 2N7002P,215	7	
*		Q3	92U00048	004234251A	TRANSISTOR_MOS CMS SOT23-6L		ST MICROELECTRONICS STT4P3LLH6	1	
*		Q9	91U00003	004234238A	TRANSISTOR_BIP CMS SOT23	NPN 30V +0.6A -55°C/+150°C - 55°C/+150°C	ON SEMICONDUCTOR MMBT2222LT1G	1	
*		R1,R7,R9,R10,R19,R32,R43,R 53,R54,R63,R72- R74,R83,R91,R92,R131,R136 ,R147-R150,R168,R170	11U00071	00140AA4045A	REST CMS 0603 100PPM	100R 1/10W 1% -55°C/+155°C	YAGEO RC0603FR-07100RL	24	
*		R2,R3,R6,R11,R27,R31,R33- R35,R41,R42,R57,R59- R61,R64,R75- R77,R87,R88,R95-R98,R101- R103,R105,R111,R116,R117, R119,R130,R135,R139,R151- R154,R156,R165	11U00108	00140AA4035A	REST CMS 0603 100PPM	10kR 1/10W 1% -55°C/+155°C	YAGEO RC0603FR-0710KL	42	

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1 2 3 4	Reference designator	טוא_עו	Item Code	Short Description	Long Description	Manufacturer & Part Number	Quantity	Commentary
*	R4,R5	11U01011	00140AA4043A	REST CMS 0603 200PPM	180R 1/10W 1% 75V -55°C/+155°C	VISHAY CRCW0603180RJNEA	2	
*	R8,R26	11U00074	00140AA4042A	REST CMS 0603 100PPM	150R 1/10W 1% -55°C/+155°C	YAGEO RC0603FR-07150RL	2	
*	R12,R69,R79,R81,R90,R109, R123-R128,R143-R145,R163	11U00009	00140AA4037A	REST CMS 0603 100PPM	OR 1/10W 20mR -55°C/+155°C	VISHAY CRCW06030000Z0EA	16	
*	R13,R17,R106,R110	11U01018	00140AA4054A	REST CMS 0603 100PPM	33R 1/10W 5% 75V -55°C/+155°C	YAGEO RC0603JR-0733RL	4	
*	R14,R62,R70,R121,R122,R13 3,R169,R171						NC	
*	R15,R18,R21,R25,R112	11U00106	00140AA4032A	REST CMS 0603 100PPM	220R 1/10W 1% -55°C/+155°C	YAGEO RC0603FR-07220RL	5	
*	R16,R45,R158	11U01012	00140AA4047A	REST CMS 0603 100PPM	1.6kR 1/10W 1% 75V -55°C/+155°C	VISHAY CRCW06031K60FKEA	3	
*	R20,R22,R51,R93,R94,R99,R 100,R104,R115,R118,R132,R 164						NC	
*	R23,R24,R113,R166	11U00156	00140AA4039A	REST CMS 0603 100PPM	470R 1/10W 1% -55°C/+155°C	YAGEO RC0603FR-07470RL	4	
*	R28,R107,R108,R120	11U00072	00140AA4048A	REST CMS 0603 100PPM	680R 1/10W 1% -55°C/+155°C	YAGEO RC0603FR-07680RL	4	
*	R29	11U00585	00140AA4049A	REST CMS 0603 100PPM	8.2kR 1/10W 1% -55°C/+155°C	YAGEO RC0603FR-078K2L	1	
*	R30	11U00110	00140AA4038A	REST CMS 0603 100PPM	1kR 1/10W 1% -55°C/+155°C	YAGEO RC0603FR-071KL	1	
*	R36,R38,R114,R167	11U00282	00140AA4053A	REST CMS 0603 100PPM	910R 1/10W 1% -55°C/+155°C	YAGEO RC0603FR-07910RL	4	
*	R37	11U00977	00140AA4040A	REST CMS 0603 100PPM	3kR 1/10W 1% -55°C/+155°C	YAGEO RC0603FR-073KL	1	
*	R39,R161	11U01009	00140AA4034A	REST CMS 2512 100PPM	1R 1.5W 1% 500V -55°C/+155°C	VISHAY CRCW25121R00FKEGHP	2	
*	R40,R44,R134	11U00069	00140AA4125A	REST CMS 0603 100PPM	4.7kR 1/10W 1% -55°C/+155°C	YAGEO RC0603FR-074K7L	3	
*	R46	11U00079	00140AA4055A	REST CMS 0603 100PPM	330R 1/10W 1% -55°C/+155°C	YAGEO RC0603FR-07330RL	1	
*	R47						NC	
*	R48						NC	
*	R49	11U01020	00140AA3976A	REST CMS 0603 25PPM	330R 1/10W 0.1% 75V -55°C/+85°C	PANASONIC ERA-3AEB331V	1	
*	R50	11U00834	00140AA4154A	REST CMS 0603 10PPM	1kR 1/8W 0.1% 75V -55°C/+155°C	VISHAY TNPW06031K00BYEN	1	
*	R52						NC	
*	R55,R129	11U01019	00140AA4051A	REST CMS 0603 100PPM	220kR 1/10W 1% 75V -55°C/+155°C	YAGEO RC0603FR-07220KL	2	
*	R56,R157	11U01013	00140AA4046A	REST CMS 0603 100PPM	44.2kR 1/10W 1% 75V -55°C/+155°C	VISHAY CRCW060344K2FKEA	2	
*	R58	11U01017	00140AA4052A	REST CMS 0603 100PPM	52.3kR 1/10W 1% 75V -55°C/+155°C	YAGEO RC0603FR-0752K3L	1	
*	R65	11U01021	00140AA3973A	REST CMS 0603 100PPM	200kR 1/10W 1% 75V -55°C/+155°C	YAGEO RC0603FR-07200KL	1	
*	R66	11U00176	00140AA4060A	REST CMS 0603 100PPM	27kR 1/10W 1% -55°C/+155°C	YAGEO RC0603FR-0727KL	1	
*	R67	11U00111	00140AA3974A	REST CMS 0603 100PPM	100kR 1/10W 1% -55°C/+155°C	YAGEO RC0603FR-07100KL	1	
*	R68	11U01027	00140AA4124A	REST 0603 100PPM	54.9kR 1/10W 1% 75V -55°C/+155°C	YAGEO RC0603FR-0754K9L	1	
*	R71,R82,R85						NC	
*	R78,R80,R84,R89	11U00878	00140AA4050A	REST CMS 1206	OR 1/4W 20mR 3.5A -55°C/+155°C	VISHAY RCA12060000ZSEA	4	
*	R86	11U01010	00140AA4041A	REST CMS 0603 100PPM	62kR 1/10W 1% 75V -55°C/+155°C	VISHAY CRCW060362K0FKEA	1	
*	R155	11U00352	00140AA3975A	REST CMS 0402	OR 20mR 1.5A -55°C/+155°C	VISHAY CRCW04020000Z0ED	1	
*	R160						NC	
*	S1-S12,S17	81U00012	00580L320A	BOUTON_POUSSOIR CMS 4PTS	DROIT 12Vc.a. 50mA -35°C/+85°C	TE CONNECTIVITY 4-1437565-1	13	
*	SW1	82U00010	00580L449A	INTERRUPTEUR GLISSIERE CMS	DPDT DROIT +6Vdc;0.3A -40°C/+85°C - 40°C/+85°C	C&K JS202011JCQN	1	



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1 2	2 3 4	rtererenee deergrater	15_1(1)5	nom oods	Short Description	Long Description	Manufacturer & Part Number	Quantity	Commentary	
*		U1,U2,U6	61U00068	00480P210A	CI_AOP_COMPAR CMS SO8	DUAL AOP +2.2V/+5.5V L NOISE - 40°C/+150°C -65°C/+150°C	TEXAS INSTRUMENTS OPA2365AIDG4	3		
*		U3	68U00002	00555A441A	CI_CAPTEUR_PRESSION CMS 1351	ANALOG +4.75V/+5.25V 0PSI/1.45PSI 5% 40°C/+125°C -40°C/+125°C	NXP MPXV5010DP	1		
*		U4	62U00134	00480P166A	CI_REGUL CMS DPAK	LIN +3V/+40V +1.2V/+37V LDO - 40°C/+125°C -65°C/+150°C	ON SEMICONDUCTOR LM317MABDTRKG	1		
*		U5						NC		
*		U7	62U00131	00480P000A	CI_REGUL CMS VSSOP10	DEC +3.5V/+60V; +8V/+65V - 40°C/+125°C	TEXAS INSTRUMENTS TPS54260DGQ	1		
*		U8	74U00004	004412472A	BUZZER CMS 8.5x8.5x4	TRANSD 4kHz +1V/+6V 100dBA - 20°C/+70°C -40°C/+85°C	CUI INC CMT-8540S-SMT-TR	1		
*		U9,U25,U26	67U00126	00480P167A	CI_DRIVER CMS SC70	BUFFER -0.5V/+4.2V -40°C/+125°C - 65°C/+150°C	TEXAS INSTRUMENTS 2N7001TDCKR	3		
*		U13	51U00068	003500326A	ALIM DC/DC CMS 18W	+6V/+42V +0.8V/+6V +3A 90% - 40°C/+125°C -65°C/+150°C	TEXAS INSTRUMENTS LMZ14203TZ- ADJ/NOPB	1		
*		U15	64U00036	00480P020A	CI_MEMOIRE CMS SO16	Voltage level Shifter +3V/+18V - 55°C/+125°C -65°C/+150°C	TEXAS INSTRUMENTS CD40109BNSR	1		
*		U16						NC		
*		U17	67U00125	00480P209A	CI_DRIVER CMS SO16W	USB +3.1V/+5.5V Isolation 5kV 12Mbps - 40°C/+105°C -65°C/+150°C	ANALOG DEVICES ADUM4160BRIZ	1		
*		U18	67U00086	00480P211A	CI_DRIVER CMS SSOP16	UART/USB +2.97V/+5.5V -40°C/+85°C - 65°C/+150°C	FTDI FT230XS	1		
*		U19	64U00034	00480P212A	CI_MEMOIRE CMS SO8	EEPROM +1.7V/+5.5V 2kB I2C - 40°C/+85°C -65°C/+150°C	ST MICROELECTRONICS M24C02- FMN6TP	1		
*		U20	65U00043	00480P113A-RD	CI_PROC CMS LQFP64	uC +1.7V/+2.1V 8Bits 256kB -40°C/+85°C 60°C/+150°C	- ST MICROELECTRONICS STM32F411RET6	1		
*		U23	62U00132	00480P165A	CI_REGUL CMS DFN6	LIN +1.25V/+6V +3.3V/2A LDO - 40°C/+125°C -55°C/+150°C	ST MICROELECTRONICS LD39200PU33R	1		
*		U24	6FU00005	00480P164A	CI_MODULE CMS RN2483 LoRa	UART +2.1V/+3.6V Tx:14dBm/Rx:- 148dBm 0 -40°C/+85°C -40°C/+115°C	MICROCHIP RN2483	1		
*		X1	73U00029	004412484A	QUARTZ CMS 6.0x3.6MM	8MHZ 20PPM 18pF -20°C/+70°C - 40°C/+85°C	ABRACON ABMM2-8.000MHZ-E2-T	1		