Bill of materials

Table 1. STEVAL-6986YT2DL bill of materials

Item	Q.ty	Ref.	Part/value	Description	Manufacturer	Order code
1	1	C1	470nF, 16V	CAP, AEC-Q200, 0.47UF, 16V, MLCC, 0402	Taiyo Yuden	EMK105ABJ474KVHF
2	1	C2	68nF, 16V	Condensatore ceramico multistrato SMD, 0.068 µF, 16 V, 0402 [1005 metrico], ± 10%, X7R	YAGEO	AC0402KRX7R7BB683
3	1	C4	10pF, 50V	Condensatore ceramico multistrato SMD, 10 pF, 50 V, 0402 [1005 metrico], ± 5%, C0G / NP0	Murata	GCM1555C1H100JA16D
4	1	C5	680pF, 25V	Condensatori in ceramica multistrato MLCC - SMD/SMT 680 pF 25 VDC 5% 0402 C0G (NP0) AEC-Q200	Murata	GRT1555C1E681JA02J
5	2	C17, C76	4.7uF, 35V	Condensatore ceramico multistrato SMD, 4.7 µF, 35 V, 0603 [1608 metrico], ± 10%, X5R	Murata	GRT188R6YA475KE13D
		C77	4.7nF, 2kV	Condensatore ceramico multistrato SMD, alta tensione, 4700 pF, 2 kV, 1808 [4520 metrico], ± 10%	KEMET	C1808C472KGRACTU
6	2	C8, C10	10uF, 50V	Condensatore ceramico multistrato SMD, 10 µF, 50 V, 1206 [3216 metrico], ± 10%, X5R	Murata	GRT31CR61H106KE01L
7	1	C9	100nF, 50V	Condensatore ceramico multistrato SMD, 0.1 µF, 50 V, 0402 [1005 metrico], ± 10%, X7R	TDK	CGA2B3X7R1H104K050BB
8	1	C11	22uF, 25V	Condensatore ceramico multistrato SMD, 22 µF, 25 V, 0805 [2012 metrico], ± 20%, X5R	Murata	GRT21BR61E226ME13L
9	1	C15	82pF, 50V	Condensatore ceramico multistrato SMD, 82 pF, 50 V, 0402 [1005 metrico], ± 5%, C0G / NP0	YAGEO	AQ0402JRNPO9BN820
10	1	C75	82pF, 50V	Condensatore ceramico multistrato SMD, 82 pF, 50 V, 0402 [1005 metrico], ± 5%, C0G / NP0	YAGEO	AQ0402JRNPO9BN820
11	1	R1	16kΩ	Resistore a chip SMD, 16 kohm, ± 1%, 62.5 mW, 0402 [1005 metrico], film spesso	Vishay	CRCW040216K0FKED
12	1	R2	1.1kΩ	Resistore a chip SMD, 1.1 kohm, ± 1%, 100 mW, 0402 [1005 metrico], film spesso, precisione	KOA	RK73H1ETTP1101F
13	1	R3	33kΩ	Thick Film Resistors - SMD 33 k Ohm 62.5mW 0402 5% AEC-Q200 Standard Power Version	YAGEO	AC0402JR-0733KL
14	1	R8	600	Resistore a chip SMD, 600 ohm, ± 1%, 500 mW, 0805 [2012 metrico], film spesso, alta potenza	Vishay	CRCW0805600RFKEAHP
15	-	R14	--			
16	1	R15	0Ω	Thick Film Resistors - SMD 0402 Zero ohm Jumper 0.05ohm AEC-Q200	Panasonic	ERJ-S020R00X
17	-	R16	--			
18	1	R17	0Ω		Panasonic	ERJ-S020R00X
19	-	R18	--			
20	1	R19	0Ω		Panasonic	ERJ-S020R00X

Item	Q.ty	Ref.	Part/value	Description	Manufacturer	Order code
21	1	R20	600	Resistore a chip SMD, 600 ohm, ± 1%, 500 mW, 0805 [2012 metrico], film spesso, alta potenza	Vishay	CRCW0805600RFKEAHP
22	1	R21	4.7kΩ	Resistore SMD, 4.7 kohm, ± 1%, 250 mW, 0603 [1608 metrico], film spesso	Panasonic	ERJUP3F4701V
23	1	R22	1.2kΩ	Resistore a chip SMD, 1.2 kohm, ± 1%, 62.5 mW, 0402 [1005 metrico], film spesso	Vishay	CRCW04021K20FKED
24	1	D1	Schottky diode 100V	Automotive, Raddrizzatore Schottky, 100 V, 1 A, singolo, SOD-123 F, 2 Pin, 725 mV	ST	STPST1H100ZFY
25	1	D2, SOD123Flat	Schottky diode 100V	Automotive, Raddrizzatore Schottky, 100 V, 1 A, singolo, SOD-123 F, 2 Pin, 725 mV	ST	STPST1H100ZFY
26	1	U1, HTSSOP16	A6986I	isobuck converter	ST	A6986ITR
27	1	U15	ZD2020-AE	Transformer, dual secondary winding, 1.5kV isolation	Coilcraft	ZD2020-AE
28	1	J1	header	Connettore maschio Preci-Dip, 4 vie, 1 fila, passo 2.54mm	Mill-Max manufacturing comp.	399-10-104-10-009000
29	1	J1	header	Connettore maschio Preci-Dip, 2 vie, 1 fila, passo 2.54mm	Mill-Max manufacturing comp.	399-10-102-10-009000

Table 2. Main parameters of the transformer ZD202-AE

Description	Value
Turn ratio 1 (primary winding vs secondary winding #1)	1:1.563
Turn ratio 1 (primary winding vs secondary winding #2)	1:0.438
Magnetizing inductance (typ.)	20 µH
Leakage inductance (typ.)	250 nH
Primary winding resistance (typ.)	120 mΩ
Secondary winding resistance #1 (typ.)	370 mΩ
Secondary winding resistance #2 (typ.)	160 mΩ

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