

## Bill of Materials for the NCV786XXAR30GEVK Evaluation Kit

ON Semiconductor®



### Kit Components

Quantity	Description
1	Evaluation Board
1	ECUSIM MKII 500 series module
1	Kit case with foam insert
1	USB cable (type A Male to B Male)
1	RJ-12 phone cable for SPI
1	60W POWER SUPPLY
2	PHILIPS LED MODULES

### Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C1,C2	2	Capacitor SMD X7R	100n/100V	10%	1206	KEMET	C1206C104K1RACTU	Yes	Yes
C17,C20	2	Capacitor SMD X7R	220n/100V	10%	1206	KEMET	C1206C224K1RACTU	Yes	Yes
C3	1	Capacitor SMD X7R	1uF/50V	10%	1206	KEMET	C1206F105K5RACTU	Yes	Yes
C4	1	Capacitor SMD ELCO Low ESR	47uF/50V	20%	SIZE G	VISHAY	MAL215371479E3	Yes	Yes
C5,C6,C7,C8,C11,C12,C13,C14,C31,C32,C33,C34,C35,C36,C37,C38	16	Capacitor SMD X7R/X5R	2.2uF/100V	10%	1210	MURATA	GRM32ER72A225KA35L	Yes	Yes
C9,C26,C27	3	Capacitor SMD X7R	6.8n/100V	10%	1206	KEMET	C1206C682J1GACTU	Yes	Yes
C10	1	Capacitor SMD X7R	470n/50V	10%	1206	KEMET	C1206C474K5RACTU	Yes	Yes
C15,C16,C19	3	Capacitor SMD X7R	470n/16V	10%	0603	KEMET	C0603X474K4RACTU	Yes	Yes
C18,C21	2	Capacitor SMD X7R	10n/100V	10%	1206	AVX	12061C103KAT2A	Yes	Yes
C22,C23	2	Capacitor SMD X7R	100n/16V	10%	0603	KEMET	C0603C104K4RACTU	Yes	Yes
C24,C25,C30	3	Capacitor SMD X7R	220p/100V	10%	1206	MULTICOMP	MCCA000483	Yes	Yes
C28,C29,C39	3	Capacitor SMD X7R	100p/100V	10%	0603	KEMET	C0603C101J1GACTU	Yes	Yes
C40	1	Capacitor SMD X7R	47p/50V	10%	0603	KEMET	C0603C470J5GACTU	Yes	Yes
VLED1,TS1,LEDC1,DIAG1,VLED2,TS2,LEDC2,DIAG2,Vbb,Vbat,VBoost	11	TEST POINT	TP	-	TP	VERO	20-313140	Yes	Yes
F1	1	0451010.MRL - FUSE, QUICK BLOW, SMD, 10A	Littelfuse 451-10A	-	Littelfuse Nano	LITTELFUSE	0451010.MRL	Yes	Yes
JBATT	1	SOCKET, 4MM, PCB, RED	BRED	-	BANANA	DELTRON	571-0500-01	Yes	Yes
JTEST,JDIAG,JCONTROL	3	HEADER, VERTICAL, 4-WAYS	CON4	-	ILC4LOCK	MOLEX	22-11-2042	Yes	Yes
JEMC1,JEMC2,JEMCB	3	SOCKET, SMA, STRAIGHT PCB,50OHM	SMA_V	-	CONN_SMA_V	TYCO ELECTR.	5-1814832-1	Yes	Yes
JGND	1	SOCKET, 4MM, PCB, BLACK	BBLACK	-	BANANA	DELTRON	571-0100-01	Yes	Yes
JLS1,JLS2	2	HEADER, SIDE-ENTRY, 4WAY, 5.08MM	CON4	-	KL4/DETBASE	CAMDEN	CTB9358/4	Yes	Yes
JPOWER	1	RAPC712X - JACK SOCKET, DC	RAPC712	-	POWER JACK	SWITCHCRAFT	RAPC712X	Yes	Yes
JSPI	1	SOCKET, FCC-68, 6WAY, 6CONTACT	PhoneCon	-	RJ11-6	MOLEX	95009-2661	Yes	Yes
JSPI*	1	HEADER, VERTICAL, 6WAY	CON6	-	ILC6LOCK	MOLEX	22-11-2062	Yes	Yes
JVBoost	1	HEADER, SIDE-ENTRY, 2WAY, 5.08MM	CON2	-	KL2/DETBASE	CAMDEN	CTB9358/2	Yes	Yes
J1	1	HEADER, SQUARE PIN, 0.1", 2WAY	JMP	-	ILC2	MOLEX	22-11-2021	Yes	Yes
LED1	1	LED, 1206, LENSED, GRN	GREEN	-	1206+	OSA OPTO LIGHT	OLS 330 EG 525	Yes	Yes
L1	1	INDUCTOR, 22UH, 23A, 20%	22uH/11A	20%	IHLP6767	VISHAY	IHLP6767GZER220M01	Yes	Yes

L2,L3	2	CHOKE, SMD, 100UH	100uH/2A	20%	7447709101	WUERTH	7447709101	Yes	Yes
R1,R2,R10,R13,R15,R16,R24,R26,R28,R29,R30,R31,R32,R33,R47	15	Resistor SMD	22k	1%	0603	MULTICOMP	MC 0.063W 0603 1% 22K	Yes	Yes
R3	1	Resistor SMD	4.7	1%	1206	MULTICOMP	MC 0.125W 1206 5% 4R7	Yes	Yes
R4,R17,R22,R23,R25	5	Resistor SMD	100k	1%	0603	VISHAY	CRCW0603100KFKEA	Yes	Yes
R5,R7	2	Resistor SMD	0.02	1%	2512	WELWYN	LRF2512-R02FW	Yes	Yes
R6,R36,R38	3	Resistor SMD	120	1%	0603	VISHAY	CRCW0603120RFKEA	Yes	Yes
R8,R37,R39	3	Resistor SMD	51	1%	0603	VISHAY	CRCW060351R0FKEA	Yes	Yes
R9	1	Resistor SMD	100	1%	2512	VISHAY	CRCW2512100RFKEG	Yes	Yes
R11,R12	2	Resistor SMD	0.2	1%	2512	WELWYN	LR2512-R20FW	Yes	Yes
R18,R19	2	Resistor SMD	4.7k	1%	0603	PANASONIC	ERJP03F4701V	Yes	Yes
R20,R21	2	Resistor SMD	510	1%	0603	VISHAY	CRCW0603510RFKEA	Yes	Yes
R27,R34,R35,R43,R44,R49	6	Resistor SMD	100	1%	0603	VISHAY	CRCW0603100RFKEA	Yes	Yes
R40,R41,R42,R45,R46,R48	6	Resistor SMD	1k	1%	0603	MULTICOMP	MC 0.063W 0603 1% 1K	Yes	Yes
VD1	1	DIODE, DUAL, SCHOTTKY, 20A, 100V, TO263A	MBRB20H100CT	-	D2PAK	ON SEMICONDUCTOR	MBRB20H100CT	No	Yes
VD2	1	TVS DIODE, 1.5KW, 47V, SMC	1.5SMC47AT3G	-	SMC	ON SEMICONDUCTOR	1.5SMC47AT3G	No	Yes
VD3	1	DIODE, SCHOTTKY, 1A, 40V, SOD-123FL	MBR140SFT1	-	SOD-123	ON SEMICONDUCTOR	MBR140SFT1	No	Yes
VD4,VD5	2	SCHOTTKY RECTIFIER, 2A, 100V, 403A	MBRS2H100T3G	-	SMB	ON SEMICONDUCTOR	MBRS2H100T3G	No	Yes
VT1	1	N-Channel Power MOSFET 100 V, 32 A, 37 mC	NTD6414AN	-	D2PAK	ON SEMICONDUCTOR	NTD6414AN	No	Yes
VT2,VT3,VT4,VT5	4	BC846BWT1G - BIPOLAR TRANSISTOR	BC846BW	-	SOT-323	ON SEMICONDUCTOR	BC846BWT1G	Yes	Yes
Ground bars	4	D3082F05 - LINK, SHORTING, 0.4", PK25	D3082F05	-	10mm raster	HARWIN	D3082F05	Yes	Yes
Spacers	4	05.13.203 - SPACER, M3X20-NI	ETTINGER M3X20-NI	-	20mm length	ETTINGER	05.13.203	Yes	Yes
Socket	2	SSW-116-01-G-S - RECEPTACLE, 2.54MM, SINGLE, 16WAY	RECEPTACLE 16 pin	-	2,54mm raster	SAMTEC	SSW-116-01-G-S	Yes	Yes
Female connectors (4WAYS) for LED Modules	2	CTB9208/4 - PLUG, FREE, 4WAY, 5.08MM	FEMALE, 4WAY, 5.08MM	-	-	CAMDEN	CTB9208/4	Yes	Yes
Female connector for Vboost output	1	CTB9208/2 - PLUG, FREE, 2WAY, 5.08MM	FEMALE, 2WAY, 5.08MM	-	-	CAMDEN	CTB9208/2	Yes	Yes

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