



Bill of Materials for the RSL15 Evaluation Board

#	QTY	REFDES	DESCRIPTION	VENDOR PN	VENDOR MFG	MFG PN	ALT PN	ALT VENDOR	Cost/Unit	Cost	
1	1	C8	100pF ±5% 25V Ceramic Capacitor CG, NPO 0201 (0603 Metric)	490-17802-2-ND	Digi-key	Murata Electronics	GRM0335C1E101FA01D	Murata Electronics	GRM0335C1E101FA01D	0.0081	0.0081
2	17	C1, C5, C9, C14, C18, C19, C21, C31	0.1µF ±10% 25V Ceramic Capacitor X6S 0201 (0603 Metric)	490-10403-2-ND	Digi-key	Murata Electronics	GRM033C81E104KE14D	Murata Electronics	GR033C81E104KE14D	0.026	0.442
3	3	C7, C12, C13	2.2µF ±10% 10V Ceramic Capacitor X5R 0402 (1005 Metric)	490-10451-2-ND	Digi-key	Murata Electronics	GRM155R61A225KE95D	Murata Electronics	GRM155R61A225KE95D	0.1424	0.4272
4	2	C11, C17	1µF ±20% 10V Ceramic Capacitor X5R 0402 (1005 Metric)	490-14577-2-ND	Digi-key	Murata Electronics	GRM153R61A105ME95D	Murata Electronics	GRM153R61A105MA12D	0.18	0.36
5	2	C15, C16	1.5µF ±0.25pF 25V Ceramic Capacitor CG, NPO 0201 (0603 Metric)	490-11287-2-ND	Digi-key	Murata Electronics	GRM0335C1E1R5CA01D	n/a	n/a	0.00647	0.11294
6	3	C3, C4, C10	4.7µF ±20% 10V Ceramic Capacitor X5R 0402 (1005 Metric)	445-8023-1-ND	Digi-key	TDK Corporation	C1005X5R1A475M0S08C	Murata Electronics	GRM155R61A475SMEAD	0.0542	0.1356
7	3	C2, C6, C20	10µF ±20% 10V Ceramic Capacitor X5R 0603 (1608 Metric)	587-3258-2-ND	Digi-key	Taiyo Yuden	LMK107B8J106MALT	Samsung Electro-Mechanics	CL10A106MFR8NNC	0.0412	1.236
8	2	GPIO-A, GPIO-B	Connector Header Through Hole 12 position 0.100" (2.54mm)	52011EC-06-ND	Digi-key	Sullins Connector Solutions	PRPC0600AAN-RC	Adam Tech	PH4-12-U	0.1896	0.3792
9	1	DEBUG-EN	Dip Switch SPST 8 Position Surface Mount Slide (Standard) Actuator 25mA 24VDC	CT12188PST-ND	Digi-key	CTS Electrocomponents	218-8LPST	n/a	n/a	1.178	1.178
10	2	D1, D2	Green 570nm LED Indication - Discrete 1.7V 0603 (1608 Metric)	475-2709-3-ND	Digi-key	OSRAM	LG L29K-G2J1-24-Z	Lumex Opto	SM-LXFM0603SUGCTR	0.1	0.2
11	1	D3	Blue 468nm LED Indication - Discrete 3V 0603 (1608 Metric)	4230-1068-1-ND	Digi-key	Influx	IN-563858	n/a	1830-1061-1-ND	0.1136	0.1136
12	1	VBAT-SEL	Connector Header Surface Mount 3 position 0.100" (2.54mm)	S1013EC-03-ND	Digi-key	Sullins Connector Solutions	NREC003SABC-M30RC	Harwin Inc.	M20-8770342	0.0924	0.0924
13	1	GND-TP	PC Test Point, Compact Phosphor Bronze, Silver Plating Surface Mount Mounting Type	36-5016TR-ND	Digi-key	Keystone Electronics	5016	n/a	n/a	0.2	0.2
14	1	VDDO-EN	Connector Header Surface Mount 2 position 0.100" (2.54mm)	S1013EC-02-ND	Digi-key	Sullins Connector Solutions	NREC002SABC-M30RC	Samtec Inc.	TSM-102-01-1-SV	0.0227	0.0227
15	1	J1	Battery Retainer Coin, 20.0mm 1 Cell SMD (SMT) Tab	BAT-HLD-001-TR1R-ND	Digi-key	Linx Technologies Inc.	BAT-HLD-001-TR	Keystone Electronics	3034	0.24	0.24
16	1	J6	USB-C (USB TYPE-C) USB 2.0 Receptacle Connector 24 (16+8 Dummy) Position Surface Mount, Right Angle; Through Hole	2073-USB4110-GF-A-1-ND	Digi-key	GCCT	USB4110-GF-A	n/a	n/a	1.0672	1.0672
17	1	J3	Connector Header Surface Mount 10 position 0.050" (1.27mm)	SAM13160TR-ND	Digi-key	Samtec Inc.	F5H-105-01-F-DV-K-TR	Samtec Inc.	200-F5H10501FDVK	2.76	2.76
18	1	J2	CONN U.FL RCTP STR 50 OHM SMD	26-U.FL-B-SMT-1(80)TR-ND	Digi-key	Hirose Connector	U.FL-B-SMT-1(80)	Hirose Connector	798-UFLRSM180	0.98	0.98
19	1	L3	2.2 µH Shielded Multilayer Inductor 1.05 A 250mOhm Max 0603 (1608 Metric)	490-14478-6-ND	Digi-key	Murata Electronics	LQM18PN2R2MGHD	Murata Electronics	81-LQM18PN2R2MGHD	0.1784	0.1784
20	1	L2	1.8nH Unshielded Multilayer Inductor 600mA 150mOhm Max 0201 (0603 Metric)	490-5552-2-ND	Digi-key	Murata Electronics	LQP03TN1NXC02D	n/a	n/a	0.0293	0.0293
21	1	L1	3nH Unshielded Thick Film Inductor 450mA 250mOhm Max 0201 (0603 Metric)	490-5557-2-ND	Digi-key	Murata Electronics	LQP03TN3NOC02D	n/a	n/a	0.0293	0.0293
22	1	Q1	N-Channel 25V 220mA (Ta) 350mW (Ta) Surface Mount MOSFET-23	FDV301NR-ND	Digi-key	ON Semiconductor	FDV301N	ON Semiconductor	2V200KT1GOSCT-ND	0	0
23	1	R1	100 kOhms ±0.1% 0.063W, 1/16W Chip Resistor 0402 (1005 Metric) Moisture Resistant Thick Film	13-RC0402BR-0710KLTR-ND	Digi-key	Yageo	RC0402BR-0710KLT	Delta Electronics/Cyntec	PF055-104-NH	0.0045	0.0045
24	2	R14, R15	33 Ohms ±1% 0.063W, 1/16W Chip Resistor 0402 (1005 Metric) Thick Film	CR0402-FX-33R0GLF-ND	Digi-key	Bourns Inc.	CR0402-FX-33R0GLF	Stackpole Electronics Inc	RMCF0402J233R0	0.0045	0.009
25	5	R8, R10, R11, R13, R16	160 Ohms ±5% 0.063W, 1/16W Chip Resistor 0402 (1005 Metric) Moisture Resistant Thick Film	311-160IRTR-ND	Digi-key	Yageo	RC0402JR-07160RL	Stackpole Electronics Inc	RMCF0402FT160R	0.0053	0.0265
26	5	R1, R3, R9, R12, R17	5.1 kOhms ±5% 0.063W, 1/16W Chip Resistor 0402 (1005 Metric) Moisture Resistant Thick Film	311-5.1KRTR-ND	Digi-key	Yageo	RC0402JR-075K1L	Stackpole Electronics Inc	RMCF0402FT5K10	0.0045	0.0225
27	1	R6	220 Ohms ±5% 0.063W, 1/16W Chip Resistor 0402 (1005 Metric) Moisture Resistant Thick Film	311-220IRTR-ND	Digi-key	Yageo	RC0402JR-07220RL	Delta Electronics	PF055-221-FNH	0.0045	0.0045
28	1	R18	1.1 kOhms ±5% 0.063W, 1/16W Chip Resistor 0402 (1005 Metric) Moisture Resistant Thick Film	311-1.1KRTR-ND	Digi-key	Yageo	RC0402JR-071K1L	Yageo	Yageo	0.0045	0.0045
29	2	R20, R21	68 Ohms ±5% 0.063W, 1/16W Chip Resistor 0402 (1005 Metric) Moisture Resistant Thick Film	311-68IRTR-ND	Digi-key	Yageo	RC0402JR-0768RL	Stackpole Electronics Inc	RMCF0402JT68R0CT-ND	0.004	0.008
30	1	R19	1 M Ohms ±5% 0.063W, 1/16W Chip Resistor 0402 (1005 Metric) Moisture Resistant Thick Film	311-1.0MIRTR-ND	Digi-key	Yageo	RC0402JR-071ML	Panasonic Electronic Components	ERJ-2RKF1004K	0.0044	0.0044
31	2	AM2, R4	0 Ohms ±5% 0.063W, 1/16W Chip Resistor 0402 (1005 Metric) Thick Film	S997-CR0000TR-ND	Digi-key	Meritek	CR0000	Bourns Inc.	CR0402-JF-000GLF	0.0045	0.009
32	1	R7	390 Ohms ±5% 0.063W, 1/16W Chip Resistor 0402 (1005 Metric) Thick Film	CR0402-JW-391GLF-ND	Digi-key	Bourns Inc.	CR0402-JW-391GLF	Bourns Inc.	CR0402-FX-390GLF	0.0045	0.0045
33	2	SW1, SW2	Tactile Switch SPST-NO Top Actuated Surface Mount	SW836CT-ND	Digi-key	Omron Electronics Inc-EMC Div	B3S-1000P	Omron Electronics Inc-EMC Div	B3S-1000	0.6469	1.2938
34	1	U1	Linear Voltage Regulator IC 1 Output 500mA 6-XDFN (1.2x1.2)	NCP176AMX300TCG-ND	Digi-key	ON Semiconductor	NCP176AMX300TCG	ON Semiconductor	NCP176AMX300TCG-ND	0	0
35	2	U2, U4	Power Switch/Driver 1:1 P-Channel 3A 6-WLSCP (1.0x1.5)	NCP339AFC2TGOSTR-ND	Digi-key	ON Semiconductor	NCP339AFC2TG	ON Semiconductor	NCP339AFC2TGOST-ND	0	0
36	1	U3	RSL15 OFN-40, 5x5mm 0.4mm pitch			ON Semiconductor	RSL15 OFN			0	0
37	1	U7	Buffer, Non-Inverting, 1 Element 1 Bit per Element Open Drain Output SC-88A (SC-70-5/SOT-353)	NL17520DF2TGOSTR-ND	Digi-key	ON Semiconductor	NL17520DF2TG	ON Semiconductor	NL17520DF2TGOST-ND	0	0
38	1	U8	Clamp Iop Tyco Diode Surface Mount SOT-143B	1727-3884-1-ND	Digi-key	Nepergia USA Inc	PRRVS1V012X	Diodes Incorporated	DRTRVS1V025R-7	0.3011	0.3011
39	2	U9, U10	Voltage Level Translator Unidirectional 1 Circuit 1 Channel 6-UDFN (1.2x1)	NLSV11244MUTBGOSTR-ND	Digi-key	ON Semiconductor	NLSV11244MUTBGO	ON Semiconductor	NLSV11244MUTBGOCT-ND	0	0
40	1	U11	Voltage Level Translator Bidirectional 1 Circuit 4 Channel 100Mbps 12-UQFN (1.7x2)	NLSX5014MUTAGOSTR-ND	Digi-key	ON Semiconductor	NLSX5014MUTAG	ON Semiconductor	NLSX5014MUTAGOST-ND	0	0
41	1	U12	ARM® Cortex®-M4 Kinetis K20 Microcontroller IC 32-Bit 100MHz 128KB (128K x 8) FLASH 64-LQFP (10x10)	MK22FN128VLH10-ND	Digi-key	NXP USA Inc.	MK22FN128VLH10	NXP USA Inc.	841-MK22FN128VLH10	5.618	5.618
42	1	Y1	32.768kHz ±20ppm Crystal 12.5pF 90 kOhms 2-SMD, No Lead	887-1857-1-ND	Digi-key	TXC CORPORATION	9HT12-32-768KDFZ-T	n/a	n/a	0.99	0.99
43	1	Y2	48MHz ±20ppm Crystal 8pF 60 Ohms 4-SMD, No Lead	CTX1421TR-ND	Digi-key	CTS Frequency Controls	416F48022IKR	n/a	n/a	0.79	0.79
44	2	N/A	2 [1 x 2] Position Shunt Connector Black Closed Top 0.100" (2.54mm) Gold	S9001-ND	Digi-key	Sullins Connector Solutions	SPC0251AN	Sullins Connector Solutions	STC0251AN	0.03152	0.06304
45	4	N/A	#2-56 Pan Head Slotted Drive Nylon	RP72160-ND	Digi-key	Essentra Components	010256P018	Essentra Components	010256P025	0.04184	0.16736
46	4	N/A	Round Standoff Threaded #2-56 Nylon 0.375" (9.53mm) 3/8" Natural	145-1S7SP058-ND	Digi-key	Essentra Components	1S7SP058	Essentra Components	14HTSP114	0.23383	0.93532
47	1	N/A	USB 2.0 Cable A Male to C Male 1.00' (304.8mm) Shielded	2057-CA-USB-AM-CM-1FT-ND	Digi-key	Adam Tech	CA-USB-AM-CM-1FT	Adafruit Industries	1528-4473-ND	3.95	3.95

onsemi stock

430

2000

2000

1,845

2,000

3,000

2000

272

Total = \$23.19

Revision History

Version	Description
1.00	Initial revision
1.10	Corrected issues discovered during bring-up

Parts not populated

#	QTY	REFDES	DESCRIPTION
1	1	ANT1	PCB Copper feature
2	2	AM1, AM3	Place holders for capacitors/inductors
3	1	VDDA	Keystone PC Test Point 5001, Miniature Phosphor Bronze (1.02mm) Hole Diameter Mounting Type
4	1	J8	Pogo pins test points
5	1	RS	0 Ohms Jumper 0.063W, 1/16W Chip Resistor 0402 (1005 Metric)

NOTE : Parts highlighted in GREEN are to be sampled via ON Semiconductor

NOTE : Parts highlighted in BLUE are to be provided by ON Semiconductor via shipment from BU