

## Texas Instruments -LAUNCHXL-CC1312R1 BOM for 868MHz/915MHz band

Rev      D      WCS042

Date      October 10, 2018

## DNM - Indicates Do Not Mount

Item Number	Description	Vendor	Vendor Part Number	Part Reference	Value	Quantity	PCB Package	Maximum Operating Temperature	ROHS	REACH/SVHC Status
1	ANTENNA, NON COMPONENT, DUAL BAND OPTION - 868MHz/2440MHz, NOT APPLY	TEXAS INSTRUMENTS	DN024	A1	DNM	0		N/A	Not Applicable	Not Applicable
2	CAPACITOR, CERAMIC C0G/NP0, 12pF, 50V, -5%/+5%, - 55DEGC/+125DEGC, 0402, SMD	MURATA	GRM1555C1H120JA01D	C1 C9 C41 C88 C89	12pF	5	0402	+125DEGC	Compliant	Unaffected
3	CAPACITOR, CERAMIC X7R, 10nF, 25V, -10%/+10%, - 55DEGC/+125DEGC, 0402, SMD	MURATA	GRM155R71E103KA01D	C2 C3 C4 C7 C50 C108 C166	10nF	7	0402	+125DEGC	Compliant	Unaffected
4	CAPACITOR, CERAMIC X5R, 100nF, 10V, -10%/+10%, - 55DEGC/+85DEGC, 0201, SMD	MURATA	GRM033R61A104KE84D	C6 C78 C79 C80 C83 C84 C87	100nF	7	0201	+85DEGC	Compliant	Unaffected
5	CAPACITOR, CERAMIC X7R, 0.1uF, 25V, -10%/+10%, - 55DEGC/+125DEGC, 0402, SMD	MURATA	GRM155R71E104KE14D	C8 C12 C14 C15 C17 C19 C20 C24 C30 C38 C39 C43 C46 C52 C70 C71 C72 C73 C74 C75 C110 C114 C115 C116 C118 C119 C120 C125 C126 C127 C139 C140 C141 C152 C154 C158 C161 C162 C164 C167 C175	0.1uF	41	0402	+125DEGC	Compliant	Unaffected
6	CAPACITOR, CERAMIC C0G/NP0, 3.6pF, 50V, -0.25pF/+0.25pF, - 55DEGC/+125DEGC, 0402, SMD	MURATA	GRM1555C1H3R6CA01D	C11 C21	3.6pF	2	0402	+125DEGC	Compliant	Unaffected
7	CAPACITOR, CERAMIC, X5R, 22uF, 6.3V, -20%/+20%, - 55DEGC/+85DEGC, 0603, SMD	MURATA	GRM188R60J226MEA0D	C16 C18 C113 C156 C168 C174	22uF	6	0603	+85DEGC	Compliant	Unaffected
8	CAPACITOR, CERAMIC C0G/NP0, 7.5pF, 50V, -0.25pF/+0.25pF, - 55DEGC/+125DEGC, 0402, SMD	MURATA	GRM1555C1H7R5CA01D	C22 C23	DNM	0	0402	+125DEGC	Compliant	Unaffected
9	CAPACITOR, CERAMIC X7R, 1nF, 50V, -10%/+10%, - 55DEGC/+125DEGC, 0402, SMD	MURATA	GRM155R71H102KA01D	C25 C130	1nF	2	0402	+125DEGC	Compliant	Unaffected
10	CAPACITOR, CERAMIC C0G/NP0, 100pF, 50V, -5%/+5%, - 55DEGC/+125DEGC, 0402, SMD	MURATA	GRM1555C1H101JA01D	C31 C36	100pF	2	0402	+125DEGC	Compliant	Unaffected

11	CAPACITOR, CERAMIC C0G/NP0, 2.7pF, 50V, -0.25pF/+0.25pF, -55DEGC/+125DEGC, 0402, SMD	MURATA	GRM1555C1H2R7CA01D	C33	2.7pF	1	0402	+125DEGC	Compliant	Unaffected
12	CAPACITOR, CERAMIC C0G/NP0, 6.2pF, 50V, -0.25pF/+0.25pF, -55DEGC/+125DEGC, 0402, SMD	MURATA	GRM1555C1H6R2CA01D	C34	6.2pF	1	0402	+125DEGC	Compliant	Unaffected
13	CAPACITOR, CERAMIC C0G/NP0, 3pF, 50V, -0.25pF/+0.25pF, -55DEGC/+125DEGC, 0402, SMD	MURATA	GRM1555C1H3R0CA01D	C35	3pF	1	0402	+125DEGC	Compliant	Unaffected
14	CAPACITOR, CERAMIC C0G/NP0, 100pF, 50V, -5%/+5%, -55DEGC/+125DEGC, 0402, SMD	MURATA	GRM1555C1H101JA01D	C37	DNM	0	0402	+125DEGC	Compliant	Unaffected
15	CAPACITOR, CERAMIC X5R, 1uF, 16V, -10%/+10%, -55DEGC/+85DEGC, 0402, SMD	MURATA	GRM155R61C105KA12D	C40 C42 C44 C53 C109 C128 C133 C136 C137 C138 C145	1uF	11	0402	+85DEGC	Compliant	Unaffected
16	CAPACITOR, CERAMIC X5R, 2.2uF, 25V, -10%/+10%, -55DEGC/+85DEGC, 0402, SMD	MURATA	GRM155R61E225KE11D	C45 C48 C49 C143 C144 C149 C151 C155 C157 C159 C160 C163 C171 C173	2.2uF	14	0402	+85DEGC	Compliant	Unaffected
17	CAPACITOR, CERAMIC C0G/NP0, 15pF, 50V, -5%/+5%, -55DEGC/+125DEGC, 0402, SMD	MURATA	GRM1555C1H150JA01D	C47 C51 C153 C172	15pF	4	0402	+125DEGC	Compliant	Unaffected
18	CAPACITOR, CERAMIC X5R, 4.7uF, 6.3V, -20%/+20%, -55DEGC/+85DEGC, 0402, SMD	MURATA	GRM155R60J475ME87D	C85 C86	4.7uF	2	0402	+85DEGC	Compliant	Unaffected
19	CAPACITOR, CERAMIC X7R, 0.1uF, 50V, -10%/+10%, -55DEGC/+125DEGC, 0402, SMD	MURATA	GRM155R71H104KE14D	C106	0.1uF	1	0402	+125DEGC	Compliant	Unaffected
20	CAPACITOR, CERAMIC X7R, 33nF, 25V, -10%/+10%, -55DEGC/+125DEGC, 0402, SMD	MURATA	GRM155R71E333KA88D	C107	33nF	1	0402	+125DEGC	Compliant	Unaffected
21	CAPACITOR, CERAMIC X5R, 3.3uF, 10V, -10%/+10%, -55DEGC/+85DEGC, 0603, SMD	MURATA	GRM188R61A335KE15D	C111	3.3uF	1	0603	+85DEGC	Compliant	Unaffected
22	CAPACITOR, TANTALUM, 220uF, 10V, -20%/+20%, -55DEGC/+125DEGC, 7343-43, SMD	AVX	TPSE227M010R0100	C112	220uF	1	7343-43	+125DEGC	Compliant	Unaffected
23	CAPACITOR, CERAMIC X7R, 10uF, 16V, -10%/+10%, -55DEGC/+125DEGC, 0805, SMD	SAMSUNG ELECTRO-MECHANICS	CL21B106KOQNNNE	C117 C121 C122 C142 C147 C165	10uF	6	0805	+125DEGC	Compliant	Unaffected

24	CAPACITOR, CERAMIC C0G/NP0, 270pF, 50V, -1%/+1%, -55DEGC/+125DEGC, 0402, SMD	MURATA	GRM1555C1H271FA01D	C123 C135	270pF	2	0402	+125DEGC	Compliant	Unaffected
25	CAPACITOR, CERAMIC X7R, 0.1uF, 25V, -10%/+10%, -55DEGC/+125DEGC, 0402, SMD	MURATA	GRM155R71E104KE14D	C124 C132 C134 C170	DNM	0	0402	+125DEGC	Compliant	Unaffected
26	CAPACITOR, CERAMIC X7R, 470pF, 50V, -10%/+10%, -55DEGC/+125DEGC, 0402, SMD	MURATA	GRM155R71H471KA01D	C129	470pF	1	0402	+125DEGC	Compliant	Unaffected
27	CAPACITOR, CERAMIC X7R, 22nF, 25V, -10%/+10%, -55DEGC/+125DEGC, 0402, SMD	MURATA	GRM155R71E223KA61D	C131	22nF	1	0402	+125DEGC	Compliant	Unaffected
28	CAPACITOR, CERAMIC X5R, 47uF, 10V, -20%/+20%, -55DEGC/+85DEGC, 0805, SMD	MURATA	GRM21BR61A476ME15L	C146	47uF	1	0805	+85DEGC	Compliant	Unaffected
29	CAPACITOR, CERAMIC C0G/NP0, 15pF, 50V, -5%/+5%, -55DEGC/+125DEGC, 0402, SMD	MURATA	GRM1555C1H150JA01D	C169	DNM	0	0402	+125DEGC	Compliant	Unaffected
30	OPTO, LED, GREEN, 562nm, 2V, 0.02A, 0.08W, 0603, SMD	OSRAM	LP L296-J2L2-25	CR1 CR5	LPL296-J2L2-25	2	0603	+100DEGC	Compliant	Unaffected
31	OPTO, LED, RED, 630nm, 2V, 0.02A, 0603, SMD	OSRAM	LS L296-P2Q2-1	CR2 CR4	LS L296-P2Q2-1	2	0603	+100DEGC	Compliant	Unaffected
32	DIODE, PROTECTION, ESD ARRAY 4 CHANNELS, UNI, 6V TO 8V, -40DEGC/+85DEGC, SON6, SMD	TEXAS INSTRUMENTS	TPD4E004DRYR	CR6	TPD4E004DRY	1	SON6	+85DEGC	Compliant	Unaffected
33	DIODE, PROTECTION, ESD ARRAY 6 CHANNELS, 7V, -40DEGC/+85DEGC, QFN8, SMD	TEXAS INSTRUMENTS	TPD6E004RSER	CR7 CR8	TPD6E004RSER	2	QFN8	+85DEGC	Compliant	Unaffected
34	DIODE, ZENER, 3.9V@0.005A, 0.55W, -55DEGC/+150DEGC, SOD-323F, SMD	NEXPERIA	BZX84J-C3V9,115	CR14	DNM	0	SOD-323F	+150DEGC	Compliant	Unaffected
35	DIODE, SCHOTTKY, 1A, 30V, -65DEGC/+125DEGC, SOD-123, SMD	ON SEMICONDUCTOR	NRVB130T1G	CR15	NRVB130T1G	1	SOD-123	+125DEGC	Compliant	Unaffected
36	NON COMPONENT, FIDUCIAL MARK, ROUND 1.27MM, SMD	NON_COMPONENT	FIDUCIAL_1.27mm	FIDU1 FIDU2 FIDU3 FIDU4 FIDU5 FIDU6	DNM	0		N/A	Not Applicable	Not Applicable
37	FILTER, EMI, FERRITE BEAD, 1500@100MHz, -25%/+25%, -55DEGC/+125DEGC, 0603, SMD	MURATA	BLM18HE152SN1D	FL1 FL2 FL3	BLM18HE152SN1	3	0603	+125DEGC	Compliant	Unaffected
38	FILTER, EMI, FERRITE BEAD, 220@100MHz, -25%/+25%, -55DEGC/+125DEGC, 0805, SMD	MURATA	BLM21PG221SN1D	FL4 FL5 FL6	BLM21PG221SN1	3	0805	+125DEGC	Compliant	Unaffected
39	CONNECTOR, HEADER, FEMALE, STRAIGHT, 2 ROWS, 20 PINS, 2.54mm, PTH	SAMTEC	SSQ-110-23-L-D	J1 J2	SSQ-110-23-L-D	2		+125DEGC	Compliant	Unaffected

40	CONNECTOR, USB, FEMALE, RIGHT ANGLE, 1 ROW, 5 PINS, PITCH 0.65mm, SMD	MOLEX	105164-0001	J6	105164-0001	1		+85DEGC	Compliant	Unaffected
41	CONNECTOR, COAX, RF, FEMALE, STRAIGHT, 1 PIN, SMD	HUS-TSAN	SMA-10V21-TGG	J7	SMA-10V21-TGG	1			Compliant	Unaffected
42	INDUCTOR, STANDARD, FERRITE CORE, 6.8uH, -20%/+20%, 0.11A, 55DEGC/+125DEGC, 0805, SMD	TDK	MLZ2012N6R8LT000	L10	6.8uH	1	0805	+125DEGC	Compliant	Unaffected
43	INDUCTOR, RF, CHIP, NON-MAGNETIC CORE, 7.5nH, -5%/+5%, 0.3A, -55DEGC/+125DEGC, 0402, SMD	MURATA	LQG15HS7N5J02D	L11 L32	7.5nH	2	0402	+125DEGC	Compliant	Unaffected
44	INDUCTOR, RF, CHIP, NON-MAGNETIC CORE, 27nH, -5%/+5%, 0.3A, -55DEGC/+125DEGC, 0402, SMD	MURATA	LQG15HS27NJ02D	L12	27nH	1	0402	+125DEGC	Compliant	Unaffected
45	INDUCTOR, RF, CHIP, NON-MAGNETIC CORE, 6.8nH, -5%/+5%, 0.3A, -55DEGC/+125DEGC, 0402, SMD	MURATA	LQG15HS6N8J02D	L33 L34	6.8nH	2	0402	+125DEGC	Compliant	Unaffected
46	NON COMPONENT, LABEL, CE	NON_COMPONENT	NON_COMPONENT_LABEL_CE	LBL1	DNM	0		N/A	Not Applicable	Not Applicable
47	NON COMPONENT, LABEL, TEXAS INSTRUMENTS LOGO	NON_COMPONENT	TI_LOGO	LBL2	DNM	0		N/A	Not Applicable	Not Applicable
48	NON COMPONENT, LABEL, FOR EVALUATION ONLY, NOT FCC APPROVED FOR RESALE	NON_COMPONENT	LABEL_FOR_EVALUATOIN_ONLY	LBL4	DNM	0		N/A	Not Applicable	Not Applicable
49	NON COMPONENT, LABEL, TRASH	NON_COMPONENT	TRASH	LBL6	DNM	0		N/A	Not Applicable	Not Applicable
50	MECHANIC, SHUNT, CURRENT RATING 4.3A PER PIN, 2.54 X 5.08 X 6.1mm, BLACK	SAMTEC	SNT-100-BK-G	M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14	SNT-100-BK-G	14		+125DEGC	Compliant	Unaffected
51	MECHANIC, ACCESSORY, SPACER SUPPORT, PCB DIA. 3mm, NYLON 66, PTH	SUZHOU SOLY ELECTRICIAN	DCB-10	M15 M16 M17 M18	DCB-10	4		N/A	Compliant	Unaffected
52	NON COMPONENT, HOLE 3.2mm, PLATED HOLE, PTH	NON_COMPONENT	HOLE_3.2mm_PLATED	MH1 MH2 MH3 MH4	DNM	0		N/A	Not Applicable	Not Applicable
53	NON COMPONENT, HOLE 1.1mm, PLATED HOLE, PTH	NON_COMPONENT	HOLE_1.1mm_PLATED	MH5	DNM	0		N/A	Not Applicable	Not Applicable
54	CONNECTOR, HEADER, MALE, STRAIGHT, 1 ROW, 3 PINS, PITCH 2.54mm, PTH	GRADCONN	BB02-HC031-KB1-603000	P1 P2 P10	BB02-HC031-KB1-603000	3		+105DEGC	Compliant	Unaffected
55	CONNECTOR, HEADER, MALE, STRAIGHT, 2 ROWS, 22 PINS, PITCH 2.54mm, PTH	GRADCONN	BB02-HJ221-KB1-603000	P4	BB02-HJ221-KB1-603000	1		+105DEGC	Compliant	Unaffected

56	CONNECTOR, HEADER, MALE, STRAIGHT, 2 ROWS, 10 PINS, PITCH 1.27mm, SMD	SAMTEC	FTSH-105-01-F-DV-K	P5 P7	FTSH-105-01-F-DV-K	2		+125DEGC	Compliant	Unaffected
57	CONNECTOR, HEADER, MALE, STRAIGHT, 2 ROWS, 4 PINS, PITCH 2.54mm, PTH	GRADCONN	BB02-HJ041-KB1-603000	P6	BB02-HJ041-KB1-603000	1		+105DEGC	Compliant	Unaffected
58	NON COMPONENT, CONNECTOR, CABLE, PLUG OF NAILS, 10 PINS, 2 ROWS, SMD	TAG-CONNECT	TC2050-IDC-NL	P8	DNM	0		N/A	Not Applicable	Not Applicable
59	NON COMPONENT, PCB, TEXAS INSTRUMENTS	Any	WCS042	PCB1	As Per Fab Drawing-WCS042	1		N/A	Compliant	Unaffected
60	RESISTOR, THICK FILM, 100k, - 5%/+5%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW0402100KJNED	R1 R61 R62 R63 R65 R96 R97 R98 R105 R114 R117 R118 R119 R136	100k	14	0402	+155DEGC	Compliant	Unaffected
61	RESISTOR, THICK FILM, 3.3k, - 5%/+5%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW04023K30JNED	R2 R3 R58	3.3k	3	0402	+155DEGC	Compliant	Unaffected
62	RESISTOR, THICK FILM, 0, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW04020000Z0ED	R5 R6 R9 R99 R100 R108 R131	0	7	0402	+155DEGC	Compliant	Unaffected
63	RESISTOR, THICK FILM, 0, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW04020000Z0ED	R7 R8 R106 R111	DNM	0	0402	+155DEGC	Compliant	Unaffected
64	RESISTOR, THICK FILM, 2.2k, - 1%/+1%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW04022K20FKED	R11 R130	2.2k	2	0402	+155DEGC	Exempt	Unaffected
65	RESISTOR, THICK FILM, 220, - 5%/+5%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW0402220RJNED	R14 R25	220	2	0402	+155DEGC	Exempt	Unaffected
66	RESISTOR, THICK FILM, 180, - 5%/+5%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW0402180RJNED	R15 R23	180	2	0402	+155DEGC	Exempt	Unaffected
67	RESISTOR, THICK FILM, 10k, - 5%/+5%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW040210K0JNED	R17	10k	1	0402	+155DEGC	Exempt	Unaffected
68	RESISTOR, THICK FILM, 4.7k, - 1%/+1%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW04024K70FKED	R18 R126 R156	4.7k	3	0402	+155DEGC	Exempt	Unaffected
69	RESISTOR, THICK FILM, 100, - 5%/+5%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW0402100RJNED	R20 R55 R56 R57	100	4	0402	+155DEGC	Exempt	Unaffected
70	RESISTOR, TBD, 0402, SMD, DNM	MANUFACTURE R SELECTION	RESISTOR_TBD_0402_DNM	R21 R59 R60	DNM	0	0402	N/A	Not Applicable	Not Applicable
71	RESISTOR, THICK FILM, 1k, - 5%/+5%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW04021K00JNED	R27 R29 R30 R39	1k	4	0402	+155DEGC	Exempt	Unaffected

72	RESISTOR, THICK FILM, 4.87k, - 1%/+1%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW04024K87FKED	R28	4.87k	1	0402	+155DEGC	Exempt	Unaffected
73	RESISTOR, THICK FILM, 51, - 5%/+5%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW040251R0JNED	R31	51	1	0402	+155DEGC	Exempt	Unaffected
74	RESISTOR, THICK FILM, 33k, - 1%/+1%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW040233K0FKED	R32	33k	1	0402	+155DEGC	Exempt	Unaffected
75	RESISTOR, THICK FILM, 51k, - 5%/+5%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW040251K0JNED	R33 R132 R151	51k	3	0402	+155DEGC	Exempt	Unaffected
76	RESISTOR, THICK FILM, 30k, - 5%/+5%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW040230K0JNED	R34 R133 R135 R152	30k	4	0402	+155DEGC	Exempt	Unaffected
77	RESISTOR, THICK FILM, 0, 0R/+0.02R, 0.1W, 75V, - 55DEGC/+155DEGC, 0603, SMD	VISHAY	CRCW06030000Z0EC	R46 R47	DNM	0	0603	+155DEGC	Exempt	Unaffected
78	RESISTOR, THICK FILM, 0, 0R/+0.02R, 0.1W, 75V, - 55DEGC/+155DEGC, 0603, SMD	VISHAY	CRCW06030000Z0EC	R12 R48 R49 R51 R52	0	5	0603	+155DEGC	Exempt	Unaffected
79	RESISTOR, THICK FILM, 10k, - 5%/+5%, 0.05W, 30V, - 55DEGC/+155DEGC, 0201, SMD	VISHAY	CRCW020110K0JNED	R82 R83 R92	10k	3	0201	+155DEGC	Exempt	Unaffected
80	RESISTOR, THICK FILM, 12k, - 1%/+1%, 0.05W, 30V, - 55DEGC/+155DEGC, 0201, SMD	VISHAY	CRCW020112K0FKED	R84	12k	1	0201	+155DEGC	Exempt	Unaffected
81	RESISTOR, THICK FILM, 1M, - 1%/+1%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW04021M00FKED	R87 R154	1M	2	0402	+155DEGC	Exempt	Unaffected
82	RESISTOR, THICK FILM, 1k, - 5%/+5%, 0.05W, 30V, - 55DEGC/+155DEGC, 0201, SMD	VISHAY	CRCW02011K00JNED	R90 R91	1k	2	0201	+155DEGC	Exempt	Unaffected
83	RESISTOR, THICK FILM, 20k, - 5%/+5%, 0.05W, 30V, - 55DEGC/+155DEGC, 0201, SMD	VISHAY	CRCW020120K0JNED	R93	20k	1	0201	+155DEGC	Exempt	Unaffected
84	RESISTOR, THICK FILM, 22, - 5%/+5%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW040222R0JNED	R94	22	1	0402	+155DEGC	Exempt	Unaffected
85	RESISTOR, THICK FILM, 1.2k, - 1%/+1%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW04021K20FKED	R95 R101 R109 R120	1.2k	4	0402	+155DEGC	Exempt	Unaffected
86	RESISTOR, THICK FILM, 330, - 1%/+1%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW0402330RFKED	R102 R110	330	2	0402	+155DEGC	Exempt	Unaffected

87	RESISTOR, THICK FILM, 4.99, - 1%/+1%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW04024R99FKED	R103 R112	4.99	2	0402	+155DEGC	Exempt	Unaffected
88	RESISTOR, THICK FILM, 10, - 1%/+1%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW040210R0FKED	R104 R113 R153	10	3	0402	+155DEGC	Exempt	Unaffected
89	RESISTOR, THICK FILM, 1, - 1%/+1%, 1W, 200V, - 55DEGC/+155DEGC, 1218, SMD	VISHAY	CRCW12181R00FNEK	R107	1	1	1218	+155DEGC	Exempt	Unaffected
90	RESISTOR, THICK FILM, 1.2k, - 1%/+1%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW04021K20FKED	R115	DNM	0	0402	+155DEGC	Exempt	Unaffected
91	RESISTOR, THICK FILM, 60.4k, - 1%/+1%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW040260K4FKED	R116 R134	60.4k	2	0402	+155DEGC	Exempt	Unaffected
92	RESISTOR, THICK FILM, 22k, - 5%/+5%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW040222K0JNED	R121	22k	1	0402	+155DEGC	Exempt	Unaffected
93	RESISTOR, THICK FILM, 0.22, - 1%/+1%, 0.125W, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	RCWE0402R220FKEA	R122	0.22	1	0402	+155DEGC	Exempt	Unaffected
94	RESISTOR, THICK FILM, 82, - 1%/+1%, 0.25W, 200V, - 55DEGC/+155DEGC, 1206, SMD	VISHAY	CRCW120682R0FKEA	R123	82	1	1206	+155DEGC	Exempt	Unaffected
95	RESISTOR, THICK FILM, 36.5, - 1%/+1%, 0.5W, 200V, - 55DEGC/+155DEGC, 1210, SMD	VISHAY	CRCW121036R5FKEA	R125	36.5	1	1210	+155DEGC	Exempt	Unaffected
96	RESISTOR, THICK FILM, 47k, - 5%/+5%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW040247K0JNED	R127 R128 R129	47k	3	0402	+155DEGC	Exempt	Unaffected
97	RESISTOR, THICK FILM, 2.61k, - 1%/+1%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW04022K61FKED	R137	2.61k	1	0402	+155DEGC	Exempt	Unaffected
98	RESISTOR, THICK FILM, 51k, - 5%/+5%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW040251K0JNED	R138	DNM	0	0402	+155DEGC	Exempt	Unaffected
99	RESISTOR, THICK FILM, 390k, - 5%/+5%, 0.063W, 50V, - 55DEGC/+155DEGC, 0402, SMD	VISHAY	CRCW0402390KJNED	R155	390k	1	0402	+155DEGC	Exempt	Unaffected
100	SWITCH, TACT, 0.05A@12VDC, 0.05A@250VAC, SMD	DIPTRONICS	1188E-1K2-V-TR	SW1 SW2 SW3	1188E-1K2	3		+70DEGC	Compliant	Unaffected
101	IC, MICROCONTROLLER, TEXAS INSTRUMENTS, CUSTOM, CC1312R1F3RGZ, 1.8V TO 3.8V, VQFN48, SMD	TEXAS INSTRUMENTS	CC1312R1F3RGZ	U1	CC1312R1F3RGZ	1	VQFN48	+85DEGC	Compliant	Unaffected



102	IC, MEMORY, FLASH, SERIAL, 8Mbit, 1.65V TO 3.6V, USON8, SMD	MACRONIX	MX25R8035FZUILO	U4	MX25R8035FZUILO	1	uSON8	+85DEGC	Compliant	Unaffected
103	IC, ANALOG, PRECISION MICROPOWER SHUNT VOLTAGE REFERENCE, 2.5V, SC70-5, SMD	TEXAS INSTRUMENTS	LM4040B25IDCKR	U6	LM4040B25IDCK	1	SC70-5	+85DEGC	Compliant	Unaffected
104	IC, ANALOG, ULTRALOW-NOISE, HIGH PSRR, FAST, RF, 1A LOW-DROPOUT LINEAR REGULATORS, VIN:2.7V TO 5.5V, VOUT:1.2V TO 5.5V, SON8, SMD	TEXAS INSTRUMENTS	TPS79601DRBR	U7 U42 U46	TPS79601DR	3	SON8	+125DEGC	Compliant	Unaffected
105	IC, DIGITAL, LOGIC, 4bit DUAL-SUPPLY BUS TRANSCEIVER 3 STATE OUTPUT, 1.2V TO 3.6V, UQFN16, SMD	TEXAS INSTRUMENTS	SN74AVC4T245RSVR	U8 U9 U10	SN74AVC4T245RSV	3	UQFN16	+85DEGC	Compliant	Unaffected
106	IC, DIGITAL, INTERFACE, HI-SPEED USB HOST, 3.3V, QFN32-EP, SMD	MICROCHIP	USB3300-EZK	U15	USB3300-EZK	1	QFN32-EP	+85DEGC	Compliant	Unaffected
107	IC, ANALOG, 0.3R DUAL SPDT ANALOG SWITCH DUAL-CHANNEL 2:1 MULTIPLEXER/DEMULTIPLEXER, 1.65V TO 3.6V, SON10-EP, SMD	TEXAS INSTRUMENTS	TS3A24159DRCR	U33 U38	TS3A24159DRC	2	SON10-EP	+85DEGC	Compliant	Unaffected
108	IC, DIGITAL, LOGIC, D-TYPE FLIP-FLOP WITH CLEAR AND PRESET, 1.65V TO 5.5V, VSSOP8, SMD	TEXAS INSTRUMENTS	SN74LVC2G74DCUR	U34	SN74LVC2G74DCU	1	VSSOP8	+85DEGC	Compliant	Unaffected
109	IC, MIXED, 24-BIT WIDE-BANDWIDTH ANALOG TO DIGITAL CONVERTER, 2.7V TO 3.6V/1.7V TO 3.6V, TQFP32, SMD	TEXAS INSTRUMENTS	ADS127L01IPBS	U35	ADS127L01IPBS	1	TQFP32	+125DEGC	Compliant	Unaffected
110	IC, ANALOG, INSTRUMENTATION AMPLIFIER, -/+15V, SO8, SMD	TEXAS INSTRUMENTS	INA118UB	U36	INA118UB	1	SO8	+125DEGC	Compliant	Unaffected
111	IC, ANALOG, LOW NOISE, PRECISION, 150MHz, FULLY DIFFERENTIAL AMPLIFIER, 2.7V TO 5.4V, QFN10-EP, SMD	TEXAS INSTRUMENTS	THS4551IRUNR	U37	THS4551IRUN	1	QFN10-EP	+125DEGC	Compliant	Unaffected
112	IC, ANALOG, 0.9R LOW-VOLTAGE SINGLE-SUPPLY QUAD SPST ANALOG SWITCH, 1.6V TO 3.6V, QFN14, SMD	TEXAS INSTRUMENTS	TS3A4751RUCR	U39	TS3A4751RUCR	1	QFN14	+85DEGC	Compliant	Unaffected



113	IC, ANALOG, HIGH PRECISION VOLTAGE REFERENCE, VIN:3V TO 5.5V, VOUT:2.5V, VSSOP8, SMD	TEXAS INSTRUMENTS	REF6025IDGKR	U40	REF6025IDGK	1	VSSOP8	+125DEGC	Compliant	Unaffected
114	IC, ANALOG, RAIL-TO-RAIL I/O CMOS OPERATIONAL AMPLIFIER, -/+0.9V TO 5.5V, SOT23-5, SMD	TEXAS INSTRUMENTS	OPA320AIDBVT	U41	OPA320AIDBV	1	SOT23-5	+125DEGC	Compliant	Unaffected
115	IC, ANALOG, 0.25A LINEAR REGULATOR FOR RF AND ANALOG CIRCUITS-REQUIRES NO BYPASS CAPACITOR, VIN:2.2V TO 5.5V, VOUT: 1.8V, SOT23-5, SMD	TEXAS INSTRUMENTS	LP5907MFX-1.8/NOPB	U43	LP5907MFX-1.8	1	SOT23-5	+125DEGC	Compliant	Unaffected
116	IC, ANALOG, 0.15A LOW DROPOUT REGULATOR WITH REVERSE CURRENT PROTECTION, VIN:1.7V TO 5.5V, VOUT:1.2V TO 5.5V, SOT23-5, SMD	TEXAS INSTRUMENTS	TPS73101DBVR	U44	TPS73101DBV	1	SOT23-5	+125DEGC	Compliant	Unaffected
117	IC, ANALOG, CMOS OPERATIONAL AMPLIFIER, - /+0.9V TO 5.5V, SC70-5, SMD	TEXAS INSTRUMENTS	OPA314AIDCKR	U45	DNM	0	SC70-5	+125DEGC	Compliant	Unaffected
118	IC, ANALOG, EFUSE WITH FAST OVERVOLTAGE PROTECTION, 2.7V TO 18V, WSON8-EP, SMD	TEXAS INSTRUMENTS	TPS259530DSGR	U47	TPS259530DSG	1	WSON8-EP	+125DEGC	Compliant	Unaffected
119	IC, MICROCONTROLLER, TIVA C SERIES, ARM CRTEX-M4, 2.97V TO 3.63V, TQFP128, SMD	TEXAS INSTRUMENTS	TM4C1294NCPDTT3R	U5	TM4C1294NCPDTT3R	1	TQFP128	+85DEGC	Compliant	Unaffected
120	CRYSTAL, RESONATOR, 32.768kHz, -40DEGC/+85DEGC, SMD	EPSON	FC-135 32.7680KA-AG0	Y1	32.768kHz	1		+85DEGC	Exempt	This device contains Lead titanium trioxide, CAS# 12060-00-3, which exceeds the 0.1% SVHC limit.
121	CRYSTAL, RESONATOR, 48MHz, - 20PPM/+20PPM, - 40DEGC/+85DEGC, SMD	NDK	NX2016SA 48.000MHz EXS00A-CS05517	Y2	48MHz	1		+85DEGC	Compliant	Unaffected
122	CRYSTAL, RESONATOR, 16MHz, - 30PPM/+30PPM, - 40DEGC/+85DEGC, SMD	NDK	NX3225GA-16.000M-STD-CRG-1	Y3	16MHz	1		+85DEGC	Exempt	Unaffected
123	CRYSTAL, RESONATOR, 24MHz, - 50PPM/+50PPM, - 40DEGC/+85DEGC, SMD	EPSON	FA-238 24.0000MB50X-W0	Y4	24MHz	1		+85DEGC	Compliant	Unaffected

124	CRYSTAL, OSCILLATOR, XO, 16.384MHz, -50PPM/+50PPM, 3.3V, -20DEGC/+70DEGC, SMD	CTS COMPONENTS	636L3C016M38400	Y6	16.384MHz	1		+70DEGC	Compliant	Unaffected
125	CRYSTAL, OSCILLATOR, TCXO, 48MHz, -0.5PPM/+0.5PPM, 1.8V TO 3.3V, -40DEGC/+85DEGC, SMD	EPSON	TG2016SMN 48.000000MHz TCGNNM (X1G005441011611)	Y7	48MHz	1		+85DEGC	Compliant	Unaffected
126	INDUCTOR, RF, CHIP, NON-MAGNETIC CORE, 3.3nH, -0.5nH/+0.5nH, 0.9A, -55DEGC/+125DEGC, 0402, SMD	MURATA	LQW15AN3N3D10D	Z60	3.3nH	1	0402	+125DEGC	Compliant	Unaffected
127	CAPACITOR, CERAMIC, TBD, 0402, SMD, DNM	MANUFACTURE R SELECTION	CAPACITOR_TBD_0402_DNM	Z61	DNM	0	0402	+125DEGC	Not Applicable	Not Applicable
128	INDUCTOR, TBD, 0402, SMD, DNM	MANUFACTURE R SELECTION	INDUCTOR_TBD_0402_DNM	Z62	DNM	0	0402	N/A	Not Applicable	Not Applicable
129	CAPACITOR, CERAMIC COG/NPO, 5.6pF, 50V, -0.1pF/+0.1pF, -55DEGC/+125DEGC, 0201, SMD	MURATA	GRM0335C1H5R6BA01J	Z63	5.6pF	1	0201	+125DEGC	Compliant	Unaffected