

SEMTECH		LoRa		SX1272RF1xAS - BOM			BOM # V1a
				14.12.2015	EMr	Version e243V03a	SCH # e243V03a
							PCB # e243V03a
RefDes	MPN	Geom	Value	Qty	Description	Manufacturer	
IC							
U1	SX1272IMLTRT	TQFN-28 6x6mm	SX1272	1	860MHz to 1020MHz Low Power Long Range Transceiver	Semtech	
U2	PE4259	SC-70	-	1	PE4259 - 10MHz to 3GHz SPDT RF Switch	Peregrine Semi	
U3	24AA128-UMF	VDFN-8	-	1	128k I2C CMOS Serial EEPROM (not mandatory for RF design)	Microchip	
U4	CRCW0603000Z0EA	0603	0R	1	Thick Film Resistor ±5%, 1/10W	Vishay/Dale	
Resistors							
R2	CRCW04021K00JNED	0402	1k	1	Thick Film Resistor ±5%, 1/16W	Vishay/Dale	
R4	EXB-N8V101JX	EXB28V	100R	1	SMD Resistor Array Resistors (4x), ±5%, 31mW	Panasonic - ECG	
R5	EXB-N8V101JX	EXB28V	100R	1	SMD Resistor Array Resistors (4x), ±5%, 31mW	Panasonic - ECG	
R6	CRCW0402000Z0ED	0402	0R	1	Thick Film Resistor ±5%, 1/16W	Vishay/Dale	
R9	CRCW0402000Z0ED	0402	0R	1	Thick Film Resistor ±5%, 1/16W	Vishay/Dale	
R10	CRCW04024K70JNED	0402	4.7k	1	Thick Film Resistor ±5%, 1/16W	Vishay/Dale	
R13	EXB-N8V101JX	EXB28V	100R	1	SMD Resistor Array Resistors (4x), ±5%, 31mW	Panasonic - ECG	
R14	CRCW0402100RJNED	0402	100R	1	Thick Film Resistor ±5%, 1/16W	Vishay/Dale	
Capacitors							
C1	GRM1555C1H150JA01D	0402	15pF	1	Multilayer ceramic capacitors C0G ±5%, 50V for Rakon Crystal (18pF for NDK)	Murata	
C2	GRM1555C1H150JA01D	0402	15pF	1	Multilayer ceramic capacitors C0G ±5%, 50V for Rakon Crystal (18pF for NDK)	Murata	
C3	GRM155R71C104KA88D	0402	100nF	1	Multilayer ceramic capacitors X7R ±10%, 16V	Murata	
C4	GRM155R71C104KA88D	0402	100nF	1	Multilayer ceramic capacitors X7R ±10%, 16V	Murata	
C5	GRM155R71C104KA88D	0402	100nF	1	Multilayer ceramic capacitors X7R ±10%, 16V	Murata	
C6	GRM155R71C104KA88D	0402	100nF	1	Multilayer ceramic capacitors X7R ±10%, 16V	Murata	
C7	GRM155R71E103KA01D	0402	10nF	1	Multilayer ceramic capacitors X7R ±10%, 25V	Murata	
C8	GRM1555C1H470JZ01D	0402	47pF	1	Multilayer ceramic capacitors C0G ±5%, 50V	Murata	
C9	GRM1555C1H220JZ01D	0402	22pF	1	Multilayer ceramic capacitors C0G ±5%, 50V	Murata	
C10	GRM1555C1H8R2CZ01D	0402	8.2pF	1	Multilayer ceramic capacitors C0G ±5%, 50V	Murata	
C11	GRM1555C1H8R2CZ01D	0402	8.2pF	1	Multilayer ceramic capacitors C0G ±5%, 50V	Murata	
C12	GRM1555C1H1R5CZ01D	0402	1.5pF	1	Multilayer ceramic capacitors C0G ±0.25pF, 50V	Murata	
C13	GRM1555C1H3R3CZ01D	0402	3.3pF	1	Multilayer ceramic capacitors C0G ±0.25pF, 50V	Murata	
C15	GRM1555C1H3R3CZ01D	0402	3.3pF	1	Multilayer ceramic capacitors C0G ±0.25pF, 50V	Murata	
C16	GRM1555C1H470JZ01D	0402	47pF	1	Multilayer ceramic capacitors C0G ±5%, 50V	Murata	
C17	GRM155R71H102JA01D	0402	1nF	1	Multilayer ceramic capacitors X7R ±5%, 50V	Murata	
C18	GRM1555C1H470JZ01D	0402	47pF	1	Multilayer ceramic capacitors C0G ±5%, 50V	Murata	
C21	GRM155R71C104KA88D	0402	100nF	1	Multilayer ceramic capacitors X7R ±10%, 16V	Murata	
C22	GRM155R71H102JA01D	0402	1nF	1	Multilayer ceramic capacitors X7R ±5%, 50V	Murata	
C23	GRM21BR61A106KE19L	0805	10uF	1	Multilayer ceramic capacitors X5R ±10%, 10V	Murata	
C24	GRM21BR61A106KE19L	0805	10uF	1	Multilayer ceramic capacitors X5R ±10%, 10V	Murata	
C26	GRM188R61A105KA61D	0603	1uF	1	Multilayer ceramic capacitors X5R ±10%, 10V	Murata	
Inductors & Ferrites							
L1	LQW15AN33N00D	0402	33nH	1	Wirewound Inductor ±5%	Murata	
L2	LQW15AN2N7D00D	0402	2.7nH	1	Wirewound Inductor ±0.5nH	Murata	
L3	LQW15AN5N6C10D	0402	5.6nH	1	Wirewound Inductor ±0.2nH	Murata	
L4	LQW15AN5N6C10D	0402	5.6nH	1	Wirewound Inductor ±0.2nH	Murata	
L5	LQG15HS10N02D	0402	10nH	1	Multilayer Inductor ±5%	Murata	
L6	CRCW0402000Z0ED	0402	0R	1	Thick Film Resistor ±5%, 1/16W	Vishay/Dale	
Crystal							
Q1	FTR5092-A2	QESM07 3.2x2.5mm	32.000MHz	1	Crystal unit Rakon; Tol. ±10ppm, Cload=10pF, G-Sensitivity=2ppb/G max (populated)	Rakon	
or	FTR5123-A0	QESM09 2.0x1.6mm	32.000MHz	-	Crystal unit Rakon; Tol. ±10ppm, Cload=10pF, G-Sensitivity=2ppb/G max (recommended for new design)	Rakon	
Q1	EXS00A-CS06465	NX2016SA 2.0x1.6mm	32.000MHz	-	Crystal unit NDK; Tol. ±10ppm, Cload=10pF, G-Sensitivity=2ppb/G max (recommended for new design)	NDK	
or	EXS00A-CS00131	NX2520SA 2.5x2.0mm	32.000MHz	-	Crystal unit NDK; Tol. ±10ppm, Cload=10pF, G-Sensitivity=2ppb/G max	NDK	
Q1	S0197-X-002-3	QESM07 3.2x2.5mm	32.000MHz	-	Crystal unit Taitien; Tol. ±10ppm, Cload=10pF, G-Sensitivity=2ppb/G max	Taitien	
Connectors and others (or P/N equivalent)							
ANT	142-0711-821	SMA End Launch	50 Ohms	1	SMA End launch jack receptacle for PCB mount	Emerson Network Power	
K_SM12xx (20p)	68602-120HLF	Header 2x10	20 pins	1	20 Pins - Through hole dual row male connector, Bottom side	FCI	
K_SM12xx (14p)	67997-114HLF	Header 2x7	14 pins	1	14 Pins - Through hole dual row male connector, Bottom side	FCI	
VDD_RFS	826629-2	bridge 2p 2.54mm	2.54mm	1	Through hole vertical header single row - 2 positions	Tyco Electronics	
Additional or optional components							
-	M7566-05	Jumper 2.54mm	-	1	Red Jumper Socket 2.54mm on VDD_RFS	Harwin	

Remark: components not listed in the BOM are not populated on the module.