

# Developer passive starter kit for Nordic IC

Nordic nRF52x32 & nRF51x22 IC has an integrated RF functionality including; Bluetooth® low energy ANT and 2.4GHz ultra low power communication. Our passive starter kit supports the reference design of the Nordic nRF52x32 & nRF51x22 with our range of capacitors, inductor, crystal and balun products .

Our latest kit will provide you with a comprehensive set of components with supporting part information to give everything you need to support your design when implementing the **nRF52x32** or **nRF51x22 IC**.

- Packaged in passive components in collaboration with Nordic for performance maximisation
- Kit with everything you need to support your design
- Optional components for small size application available

## Visit our reference design page

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EKSM-PND51X22A-KIT  
supporting **nRF51x22 series**

<http://go.murata.com/nrf51x22>



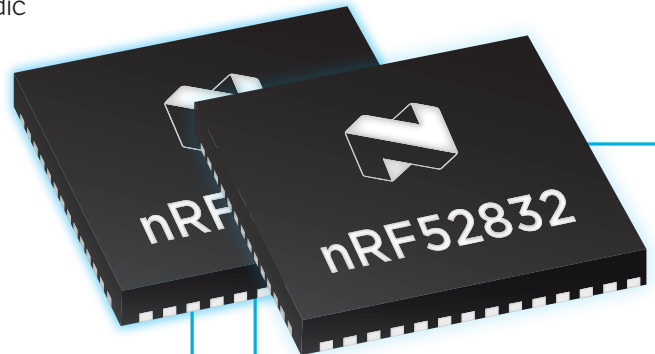
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in collaboration with  
Nordic Semiconductor



# Passive starter kit contents



Designator	Nordic				Murata					
	nRF52x32				Capacitor, Inductor, Timing Device, Balun					
	Description	QFN48 with internal LDO/low vol. mode	QFN48 With DC/DC	QFN48 With DC/DC and NFC	Status	Size	Description	Parts number	Remark	Kit QTY
C1, C2	12pF, NPO, +/-2%	2	2	2	Nordic confirmed	1.0x0.5(0402)	"(For X1:Murata XRC) 10pF, NPO, +/-2%"	<b>GRM1555C1H100GA01</b>		20
					Optional	0.6x0.3(0201)	"(For X1:Murata XRC) 10pF, NPO, +/-2%"	<b>GRM0335C1H100GA01</b>		20
C3	0.8pF, NPO, +/-5%	1	1	1	Nordic confirmed	1.0x0.5(0402)	0.8pF, NPO, +/-0.05pF	<b>GRM1555C1HR80WA01</b>		10
					Optional	0.6x0.3(0201)	0.8pF, NPO, +/-0.05pF	<b>GRM0335C1HR80WA01</b>		10
C4, C5, C8	100nF, X7R, +/-10%	3	3	3	Nordic confirmed	1.0x0.5(0402)	100nF, X7R, +/-10%	<b>GRM155R71H104KE14</b>		30
					Optional	0.6x0.3(0201)	100nF, X5R, +/-10%	<b>GRM033R61C104KE14</b>	Deviation	30
C6	N.C	N.C	N.C	N.C	-	-	-	-		-
C7	100pF, NPO, +/-5%	1	1	1	Nordic confirmed	1.0x0.5(0402)	100pF, NPO, +/-5%	<b>GRM1555C1H101JA01</b>		10
					Optional	0.6x0.3(0201)	100pF, NPO, +/-5%	<b>GRM0335C1H101JA01</b>		10
C9	4.7uF, X5R, +/-10%	1	1	1	Nordic confirmed	1.6x0.8(0603)	4.7uF, X5R, +/-10%	<b>GRM188R61A475KE15</b>		10
					Optional	1.0x0.5(0402)	4.7uF, X5R, +/-20%	<b>GRM155R61A475MEAA</b>	Deviation	10
C10	1.0uF, X7R, +/-10%	1	1	1	Nordic confirmed	1.6x0.8(0603)	1.0uF, X7R, +/-10%	<b>GRM188R71A105KA61</b>		10
					Optional	0.6x0.3(0201)	1.0uF, X5R, +/-20%	<b>GRM033R61A105ME15</b>	Deviation	10
C11, C12	12pF, NPO, +/-2%	2	2	2	Nordic confirmed	1.0x0.5(0402)	12pF, NPO, +/-2%	<b>GRM1555C1H120GA01</b>		20
					Optional	0.6x0.3(0201)	12pF, NPO, +/-2%	<b>GRM0335C1H120GA01</b>		20
Ctune1, tune2	TBD pF +/-5%	2	2	2	-	-	-	-		-
L1	3.9nH +/-5%	1	1	1	Nordic confirmed	1.0x0.5(0402)	4.7nH +/-5%	<b>LQG15HS4N7C02</b>		10
L2	10uH 50mA, +/-20%	0	1	1	Optional	1.6x0.8(0603)	10uH 50mA, +/-20%	<b>LQM18FN100M00</b>		10
L3	15nH +/-10%	0	1	1	Nordic confirmed	1.0x0.5(0402)	15nH +/-5%	<b>LQG15HS15NJ02</b>		10
X1	32MHz +/-40ppm	1	1	1	Nordic confirmed	1.6x1.2	32MHz +/-35ppm, Cs=6pF	<b>XRCMD32M000FX-P54R0</b>		10
					Nordic confirmed	2.0x1.6	32MHz +/-40ppm, Cs=6pF	<b>XRCGB32M000F2P10R0</b>		10
BAL	2.4-2.5GHz matching balun	0	0	1	Nordic confirmed	1.6x0.8(0603)	2.4-2.5GHz matching balun (QFN48)	<b>LFL0Q2G45TR2E268</b>		10

# Passive starter kit contents



Designator	Nordic				Murata					
	nRF51x22				Capacitor, Inductor, Timing Device, Balun					
	Description	QFN48 with internal LDO/low vol. mode	QFN48 With DC/DC	QFN48 With DC/DC and NFC	Status	Size	Description	Parts number	Remark	Kit QTY
C1, C2	12pF, NP0, +/-2%	2	2	2	Nordic confirmed	1.0x0.5(0402)	(For X1:Murata XRC) 10pF, NP0, +/-2%	GRM1555C1H100GA01		20
					Optional	0.6x0.3(0201)	(For X1:Murata XRC) 10pF, NP0, +/-2%	GRM0335C1H100GA01		20
C3	2.2nF, X7R, +/-10%	1	1	1	Nordic confirmed	1.0x0.5(0402)	2.2nF, X7R, +/-10%	GRM155R71C222KA01		10
					Optional	0.6x0.3(0201)	2.2nF, X5R, +/-10%	GRM033R61C222KA88	Deviation	10
C4	1.0pF, NP0, +/-0.1pF	1	1	0	-	-	0.9pF, NP0, +/-0.1pF	GRM1555C1HR90BA01		-
					Nordic confirmed	1.0x0.5(0402)	1.0pF, NP0, +/-0.1pF	GRM1555C1H1R0BA01		10
					-	-	1.1pF, NP0, +/-0.1pF	GRM1555C1H1R1BA01		-
					-	-	0.9pF, NP0, +/-0.1pF	GRM0335C1HR90BA01		-
					Optional	0.6x0.3(0201)	1.0pF, NP0, +/-0.1pF	GRM0335C1H1R0BA01		10
					-	-	1.1pF, NP0, +/-0.1pF	GRM0335C1H1R1BA01		-
C5	2.2pF, NP0, +/-0.1pF	1	1	0	-	-	2.1pF, NP0, +/-0.1pF	GRM1555C1H2R1BA01		-
					Nordic confirmed	1.0x0.5(0402)	2.2pF, NP0, +/-0.1pF	GRM1555C1H2R2BA01		10
					-	-	2.3pF, NP0, +/-0.1pF	GRM1555C1H2R3BA01		-
					-	-	2.1pF, NP0, +/-0.1pF	GRM0335C1H2R1BA01		-
					Optional	0.6x0.3(0201)	2.2pF, NP0, +/-0.1pF	GRM0335C1H2R2BA01		10
					-	-	2.3pF, NP0, +/-0.1pF	GRM0335C1H2R3BA01		-
C5 (For QFAC)	3.9pF, NP0, +/-0.1pF	1	1	1	-	-	3.8pF, NP0, +/-0.1pF	GRM1555C1H3R8BA01		-
					Nordic confirmed	1.0x0.5(0402)	3.9pF, NP0, +/-0.1pF	GRM1555C1H3R9BA01		10
					-	-	4.0pF, NP0, +/-0.1pF	GRM1555C1H4R0BA01		-
					-	-	3.8pF, NP0, +/-0.1pF	GRM0335C1H3R8BA01		-
					Optional	0.6x0.3(0201)	3.9pF, NP0, +/-0.1pF	GRM0335C1H3R9BA01		10
					-	-	4.0pF, NP0, +/-0.1pF	GRM0335C1H4R0BA01		-
C6	1.5pF, NP0, +/-0.1pF	1	1	0	-	-	1.4pF, NP0, +/-0.1pF	GRM1555C1H1R4BA01		-
					Nordic confirmed	1.0x0.5(0402)	1.5pF, NP0, +/-0.1pF	GRM1555C1H1R5BA01		10
					-	-	1.6pF, NP0, +/-0.1pF	GRM1555C1H1R6BA01		-
					-	-	1.4pF, NP0, +/-0.1pF	GRM0335C1H1R4BA01		-
					Optional	0.6x0.3(0201)	1.5pF, NP0, +/-0.1pF	GRM0335C1H1R5BA01		10
					-	-	1.6pF, NP0, +/-0.1pF	GRM0335C1H1R6BA01		-
C7	100nF	1	0	1	Nordic confirmed	1.0x0.5(0402)	100nF, X7R, +/-10%	GRM155R71H104KE14		10
					Optional	0.6x0.3(0201)	100nF, X5R, +/-10%	GRM033R61C104KE14	Deviation	10
					Nordic confirmed	1.6x0.8(0603)	4.7uF, X5R, +/-10%	GRM188R61A475KE15		10
C8, C11	100nF, X7R, +/-10%	2	2	2	Nordic confirmed	1.0x0.5(0402)	100nF, X7R, +/-10%	GRM155R71H104KE14		20
					Optional	0.6x0.3(0201)	100nF, X5R, +/-10%	GRM033R61C104KE14	Deviation	20
C9	1.0nF, X7R, +/-10%	1	1	1	Nordic confirmed	1.0x0.5(0402)	1.0nF, X7R, +/-10%	GRM155R71H102KA01		10
					Optional	0.6x0.3(0201)	1.0nF, X7R, +/-10%	GRM033R71H102KA12		10

# Passive starter kit contents



Designator	Nordic				Murata					
	nRF51x22				Capacitor, Inductor, Timing Device, Balun					
	Description	QFN48 with internal LDO/low vol. mode	QFN48 With DC/DC	QFN48 With DC/DC and NFC	Status	Size	Description	Parts number	Remark	Kit QTY
C9	1.0nF, X7R, +/-10%	1	1	1	Nordic confirmed	1.0x0.5(0402)	1.0nF, X7R, +/-10%	GRM155R71H102KA01		10
					Optional	0.6x0.3(0201)	1.0nF, X7R, +/-10%	GRM033R71H102KA12		10
C10	47nF, X7R, +/-10%	1	1	1	Nordic confirmed	1.0x0.5(0402)	47nF, X7R, +/-10%	GRM155R71C473KA01		10
					Optional	0.6x0.3(0201)	47nF, X5R, +/-10%	GRM033R61C473KE84	Deviation	10
C12	1.0uF, X7R, +/-10%	0	1	0	Nordic confirmed	1.6x0.8(0603)	1.0uF, X7R, +/-10%	GRM188R71A105KA61		10
					Optional	1.0x0.5(0402)	1.0uF, X5R, +/-20%	GRM033R61A105ME15	Deviation	10
C13, C14	12pF, NP0, +/-2%	2	2	2	Nordic confirmed	1.0x0.5(0402)	12pF, NP0, +/-2%	GRM1555C1H120GA01		20
					Optional	0.6x0.3(0201)	12pF, NP0, +/-2%	GRM0335C1H120GA01		20
L1	4.7nH +/-5%	1	1	0	-	-	4.3nH +/-0.2nH	LQG15HS4N3C02		-
					Nordic confirmed	1.0x0.5(0402)	4.7nH +/-0.2nH	LQG15HS4N7C02		10
					-	-	5.1nH +/-0.2nH	LQG15HS5N1C02		-
					-	-	4.3nH +/-3%	LQP03TN4N3H02		-
					Optional	0.6x0.3(0201)	4.7nH +/-3%	LQP03TN4N7H02		10
L2	10nH +/-5%	1	1	0	Nordic confirmed	1.0x0.5(0402)	10nH +/-5%	LQG15HS10NJ02		10
					Optional	0.6x0.3(0201)	10nH +/-5%	LQP03TN10NH02		10
L2 (For QFAC)	27nH +/-5%	1	1	0	Nordic confirmed	1.0x0.5(0402)	27nH +/-5%	LQG15HS27NJ02		10
					Optional	0.6x0.3(0201)	27nH +/-3%	LQP03TN27NH02		10
L3	3.3nH +/-5%	1	1	0	-	-	3.0nH +/-0.1nH	LQG15HS3N0B02		-
					Nordic confirmed	1.0x0.5(0402)	3.3nH +/-0.1nH	LQG15HS3N3B02		10
					-	-	3.6nH +/-0.1nH	LQG15HS3N6B02		-
					-	-	3.2nH +/-0.1nH	LQP03TN3N2B02		-
					Optional	0.6x0.3(0201)	3.3nH +/-0.1nH	LQP03TN3N3B02		10
L4	10uH 50mA, +/-20%	0	1	0	Optional	1.6x0.8(0603)	10uH 50mA, +/-20%	LQM18FN100M00		10
L5	15nH +/-10%	0	1	0	Nordic confirmed	1.0x0.5(0402)	15nH +/-5%	LQG15HS15NJ02		10
					Optional	0.6x0.3(0201)	15nH +/-3%	LQP03TN15NH02		10
X1	16MHz +/-40ppm	1	1	1	Nordic confirmed	1.6x1.2	32MHz +/-35ppm Cs=6pF"	XRCMD32M000FX-P54R0		10
					Nordic confirmed	2.0x1.6	32MHz +/-40ppm Cs=6pF	XRCGB32M000F2P10R0		10
BAL	"2.4-2.5GHz matching balun"	0	0	1	Nordic confirmed	1.6x0.8(0603)	2.4-2.5GHz matching balun (QFN48)	LFB182G45BG4D729		-
					Nordic confirmed	1.6x0.8(0603)	2.4-2.5GHz matching balun (WLCSP)	LFB182G45BG4D948		-