



ELECTRICAL SPECIFICATIONS

Conditions: VDD = +3V, VSS = 0V, T_A = - 40°C to + 85°C

Symbol	Parameter (condition)	Notes	Min.	Typ.	Max.	Units
Operating conditions						
VDD	Supply voltage		1.9	3.0	3.6	V
TEMP	Operating Temperature		-40	+27	+85	°C
Digital input pin						
V _{IH}	HIGH level input voltage		0.7·VDD		VDD	V
V _{IL}	LOW level input voltage		V _{SS}		0.3·VDD	V
Digital output pin						
V _{OH}	HIGH level output voltage (I _{OH} =-0.5mA)		VDD- 0.3		VDD	V
V _{OL}	LOW level output voltage (I _{OL} =0.5mA)		V _{SS}		0.3	V
General RF conditions						
f _{OP}	Operating frequency	1)	2400		2527	MHz
f _{XTAL}	Crystal frequency	2)	4		20	MHz
Δf	Frequency deviation			±156		kHz
R _{GFSK}	GFSK data rate ShockBurst™		>0		1000	kbps
R _{GFSK}	GFSK data rate Direct Mode	3)	250		1000	kbps
F _{CHANNEL}	Channel spacing			1		MHz
Transmitter operation						
P _{RF}	Maximum Output Power	4)		0	+4	dBm
P _{RFC}	RF Power Control Range		16	20		dB
P _{RFCR}	RF Power Range Control Resolution				±3	dB
P _{BW}	20dB Bandwidth for Modulated Carrier				1000	kHz
P _{RF2}	2 nd Adjacent Channel Transmit Power 2MHz				-20	dBc
P _{RF3}	3 rd Adjacent Channel Transmit Power 3MHz				-40	dBc
I _{VDD}	Supply current @ 0dBm output power	5)		11.5		mA
I _{VDD}	Supply current @ -5dBm output power	5)		10.0		mA
I _{VDD}	Supply current @ -10dBm output power	5)		8.5		mA
I _{VDD}	Supply current @ -20dBm output power	5)		7.0		mA
I _{VDD}	Average Supply current @ -5dBm output power, ShockBurst™	6)		500		µA
I _{VDD}	Supply current in stand-by mode			12		µA
I _{VDD}	Supply current in power down			200		nA

NOTES:

- 1) Usable band is determined by local regulations
- 2) The crystal frequency may be chosen from 5 different values (4, 8, 12, 16, and 20MHz) which are specified in the configuration word, see Table 8. 16MHz is required for 1Mbps operation.
- 3) Data rate must be either 250kbps or 1000kbps.
- 4) Antenna load impedance = 100Ω+j175Ω
- 5) Antenna load impedance = 100Ω+j175Ω. Effective data rate 250kbps or 1Mbps.
- 6) Antenna load impedance = 100Ω+j175Ω. Effective data rate 10kbps.

Table 4 nRF2402/nRF2402G electrical specifications