

RQRA-0876-0915

ELECTRICAL SPECIFICATIONS

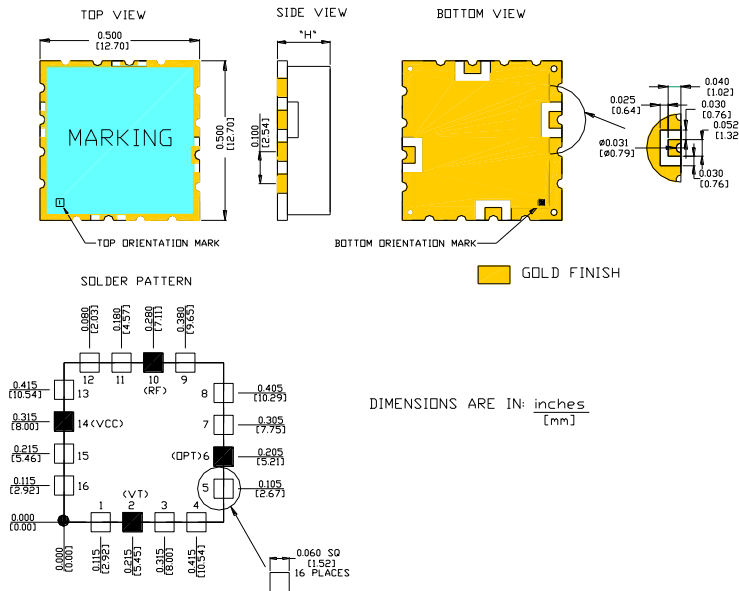
PARAMETER	CONDITION	SYMBOL	VALUE			UNIT
			Min.	Typ.	Max.	
Frequency Range	Vt=0.5 V	fo(Vt)			876	MHz
	Vt=4.5 V		915			
Power Supply Voltage		Vcc	4.75	5.0	5.25	V
Tuning Voltage	Tuning port capacitance= 100 pF typ.	Vt	0		5	V
Supply Current	Vcc=5.0V ±5%	Icc		20		mA
Tuning Sensitivity	Vt=1~4V Vcc=5.0V ±5% T=25°C	df/dVt		16		MHz/V
Pushing	Vcc=4.75 – 5.25V	df/dVcc		1		MHz-pk-pk
Pulling ^{1,2}	Return Loss: 12dB	df/dZL		1		
Operating Temperature		Ta	-35		85	°C
Storage Temperature		Tstor	-40		85	°C
Maximum Limits Voltage	V _{cc(abs)}		-0.4		8.0	V
Moisture Sensitivity Level	MSL	JEDEC J-STD-2	1			
Termination; Finish			Glass-reinforced laminate base and nickel-silver cover			
ESD Sensitivity	HBM	Human body model JESD22-A114		3		kV

OUTPUT CHARACTERISTICS

SINE-WAVE	PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
				Min	Typ.	Max	
	Output Power	Pw	Output termination 50Ω Vcc=5.0V ±5%	0	3	6	dBm
	2nd Harmonic Suppression	h ²			-20		dBc
	Spurious (Non-Harmonic)	Sp				-80	dBc
	Output Load	O _{CL}			50		Ω

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MECHANICAL DIMENSIONS AND PIN FUNCTIONING



$H = 0.138 \text{ in}$
3.20 mm

H Tolerance = $\pm 0.005 \text{ in}$
 $\pm 0.15 \text{ mm}$

PIN	SYMBOL	FUNCTION
2	Vt	Control Voltage
10	Rf _{out}	RF Output
14	Vcc	Power Supply
6, Others, Cover	GND	Ground

■ Marking:

RQRA
 0876-0915
 Date code

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PHASE NOISE

PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min	Typ	Max	
SSB Phase noise	$\Sigma(\Delta f)$	$\Delta f=10\text{kHz}$		-115		dBc
		$\Delta f=100\text{kHz}$		-130		

COMMON SPECIFICATIONS

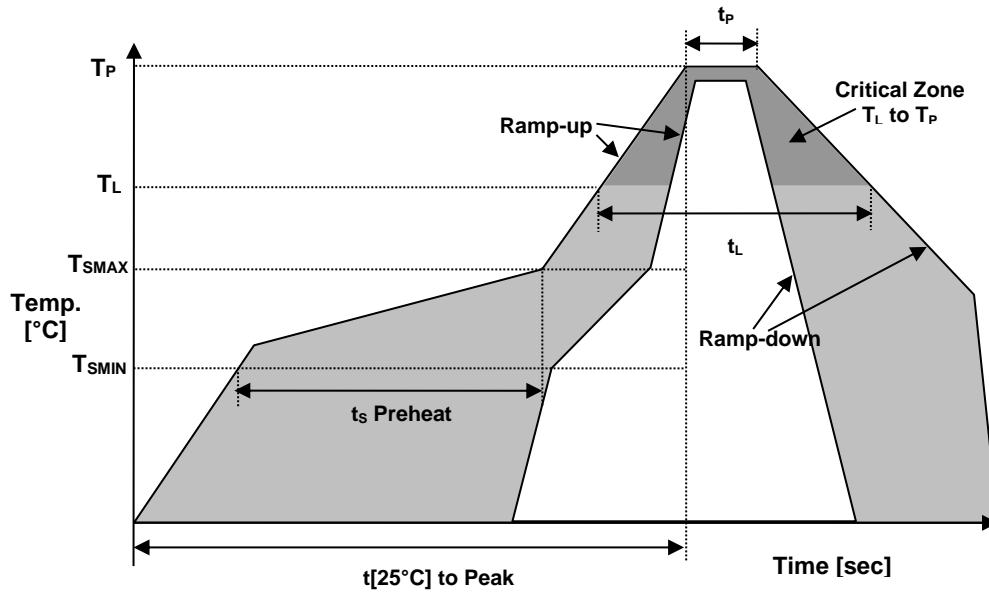
- 1.1 -Load impedance is 50 Ohms.
- 1.2 -Pulling is measured with 12dB return loss, all phases.
- 1.3- Package outline tolerances are typ. $\pm 0.30\text{mm}$ / ± 0.012 inch if not stated differently on the drawing.
- 1.4 -It is recommended to provide two bypass-capacitors (ceramic), from Vcc to Gnd, $1\text{nF} \parallel 100\text{pF}$.
- 1.5- Solder temperature (peak) is 260°C for 10-20s.

Environmental Compliance

PARAMETER	CONDITIONS
Mechanical Shock	MIL-STD-883, Method 2002
Mechanical Vibration	MIL-STD-883, Method 2007
Solderability	MIL-STD-883, Method 2003
Resistance to Solvents	MIL-STD-883, Method 2016

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REFLOW PROFILE



Recommended Solder Reflow Profile			
Temperature Min Preheat	T_{SMIN}		150°C
Temperature Max Preheat	T_{SMAX}		175°C
Time (T_{SMIN} to T_{SMAX})	t_s		60-180 sec.
Temperature	T_L		217°C
Peak Temperature	T_P		260°C
Ramp-up rate	R_{UP}		3°C/sec max.
Ramp-down rate	R_{DOWN}		6°C/sec max.
Time within 5°C of Peak Temperature	t_p		10-20 sec max.
Time $t_{[25°C]}$ to Peak Temperature	$t_{[25°C]}$ to Peak		480 sec.
Time	t_L		60-150 sec.

APPROVALS			
Eng. approval, date:	IM	09/21/2018	
Created by, date:	MH	09/21/2018	
Revision:	A		

