RQRA-0463-0514

ELECTRICAL SPECIFICATIONS

PARAMETER	CONDITION	SYMBOL	VALUE			UNIT
			Min.	Typ.	Max.	
Lower Frequency see 6.2	Vt=0.5 V	fo(Vt)			463	MHz
Upper Frequency see 6.2	Vt=10		514			
Tuning Voltage		Vt	0.5		10	V
Supply Voltage	Tolerance: ± 0.25V	Vcc	4.75	5.0	5.25	V
Supply Current		Icc			30	mA
Output Power	50 Ω Load	Pout	+2.0	+ 5.5	+8.0	dBm
Tuning Sensitivity	Maximum to Minimum Ratio	df/dVt			1.5	-
Tuning Sensitivity	Over 463-514MHz	df/dVt		7.0		MHz/V
Pushing	Over Supply Variation 5V±5%	df/dVcc			200	kHz
Pulling see 6.3	VSWR Load=2:1 at all Phase	df/dZL			200	kHz
Harmonic Suppression	-H2	a(n*fo)			-30	dBc
	-H3				-30	
Non-Harmonic Spurious - Δf ≤ 4.0 kHz - Δf > 4.0 kHz					-60 -100	dBc

PHASE NOISE

PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Typ.	Max	
SSB Phase Noise at Offset Frequency Over 0 to 55°C	L(dF)	1.0kHz		-90	-89	dBc/Hz
		12.5kHz		-114	-113	
		25kHz		-125	-120	
		50 kHz		-128	-127	
		100kHz		-140	-138	
		200kHz		-143	-140	
		500kHz		-147	-145	
		1MHz		-150	-145	
		>5MHz		-165	-160	

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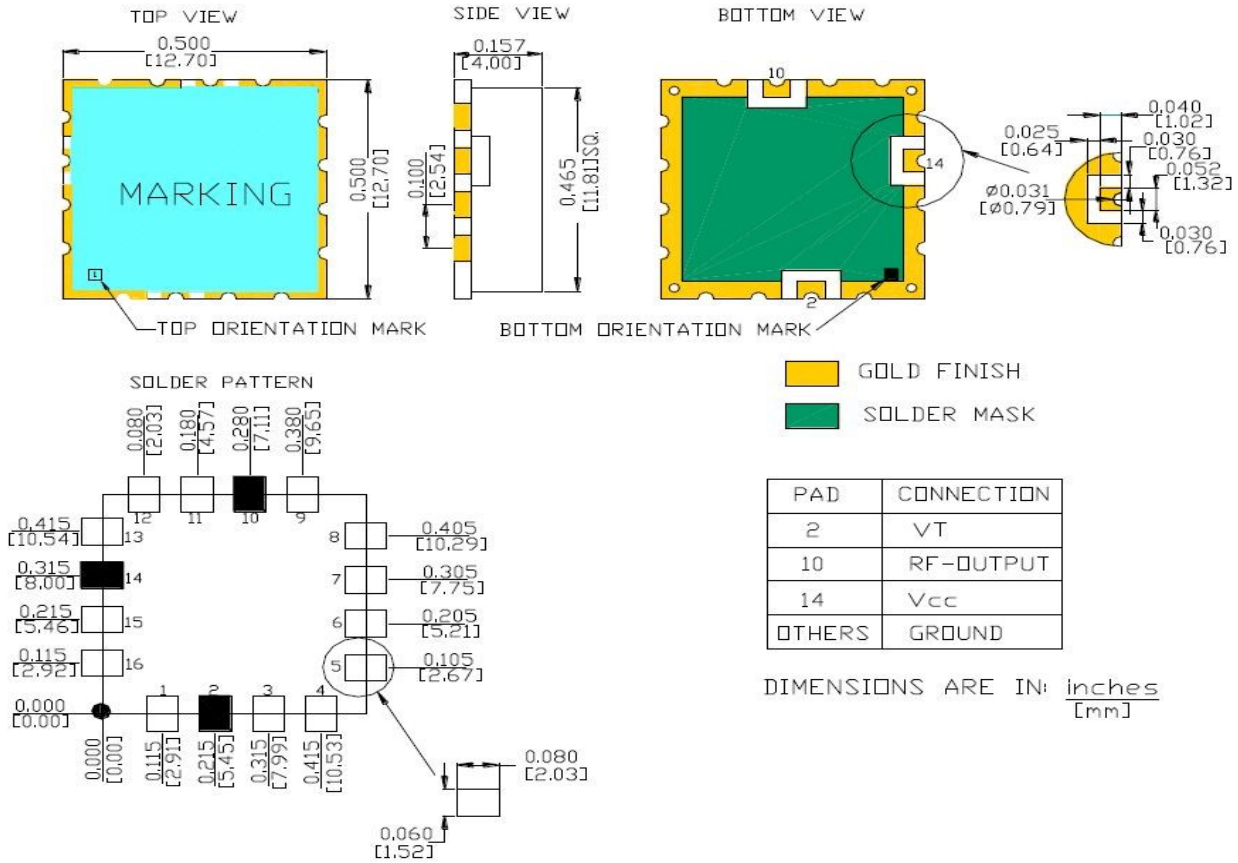
COMMON SPECIFICATION

6.1 Load impedance is 50 Ohms if not stated differently in (4.) "Extended Specification".
6.2 The frequency range is defined between the (max) lower frequency and (min) upper frequency.
6.3 Pulling is measured with 12dB return loss, all phases.
6.4 Package outline tolerances are typ. ±0.38mm/±.015inch if not stated differently on the drawing.
6.5 Product consists of glass-reinforced laminate base and nickel-silver cover.
6.6 It is recommended to provide two bypass-capacitors (ceramic), from Vcc to Gnd, 1nF || 100pF.
6.7 Solder temperature (peak) is 230°C for 10s or 260°C for 5s.
6.8 Operating temperature range is -30°C~+85°C if not stated differently in (4.) "Extended Spec".

MECHANICAL DIMENSIONS AND PIN FUNCTIONING



PAD	CONNECTION
2	VT
10	RF-OUTPUT
14	Vcc
OTHERS	GROUND

DIMENSIONS ARE IN: inches [mm]

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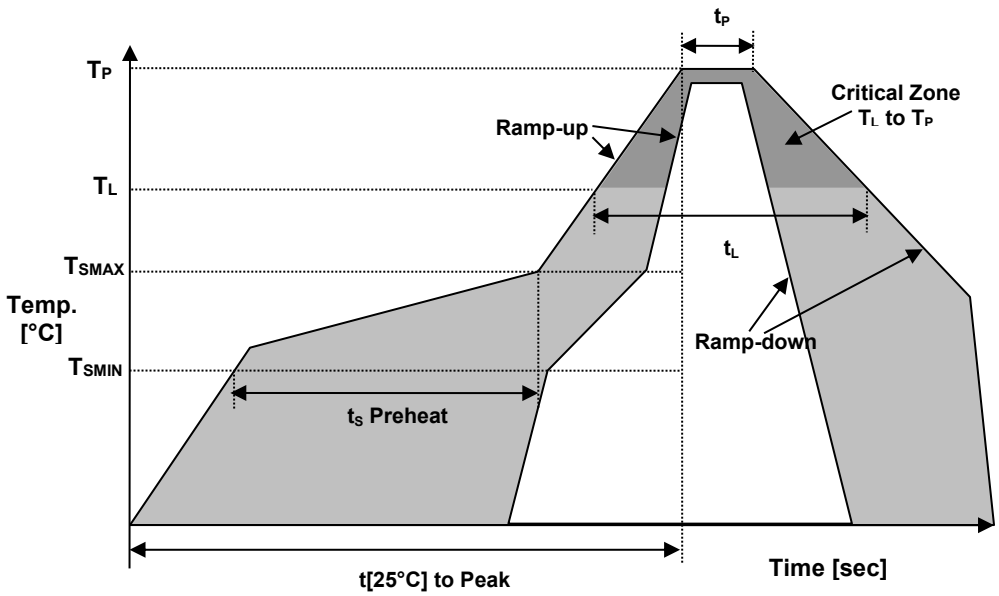
- Marking:

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

REFLOW PROFILE



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	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	01/23//2019
Created by, date:	AR	01/21//2019
Revision: A		

RoHS Compliant