

RQRB-2900-LPH

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1. Product Control

Part Number	Rev	Initiated	Updated	Reviewed	Rev. Description
RQRA-2900-LPH	A	11/10/2015	---	MP	
RQRB-2900-LPH	B		03/10/2016	IM	New control voltage range.

2. Mechanical Specification

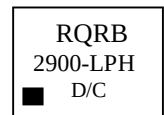
Parameter	Conditions	L_typ	W_typ	H_max	Unit
Length x Width x Height	see 6.4	12.7 (.500)	12.7(.500)	5.60 (0.22)	mm (inch)

3. Electrical Specification

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Frequency		fo(Vt)	2900		2900	MHz
Tuning Voltage		Vt	1.5		3.5	V
Supply Voltage		Vcc		5		V DC
Supply Current		Icc		19	23	mA
Output Power		Pout	2.0	3.5	5.0	dBm
Tuning Sensitivity	Over Tuning Range	df/dVt		9		MHz/V
Pushing	Over Supply Variation	df/dVcc		1		MHz/V
Pulling see 6.3	Return Loss: 12dB	df/dZL		1		MHz-p-p
Harmonic Suppression	2 nd Harmonic	a(n*fo)		-16		dBc
Phase Noise (1Hz BW)	Freq.Offset: 1kHz	L(df)	-98	-96	-91	dBc/Hz
	Freq.Offset: 10kHz	L(df)	-122	-120	-116	dBc/Hz
	Freq.Offset: 100kHz	L(df)	-141	-140	-137	dBc/Hz
	Freq.Offset: 1000kHz	L(df)	-162	-160	-153	dBc/Hz
	Freq.Offset: 10000kHz	L(df)	-165	-160	-153	dBc/Hz
Operating Temperature		Ta	-20		75	°C
Storage Temperature		Tstor	-55	25	125	°C

4. Extended Specification

5. Marking

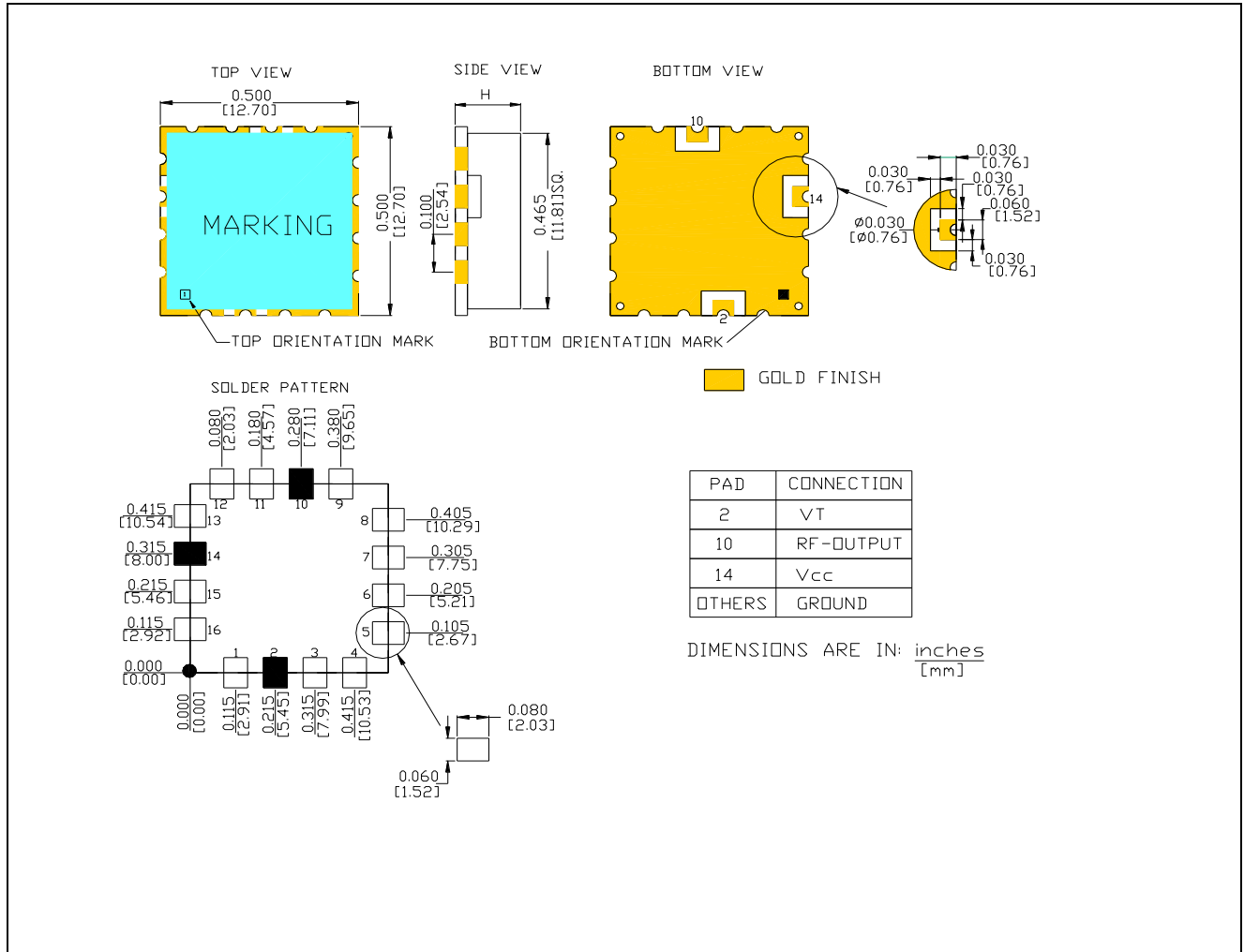


Top view
Date/Product Code

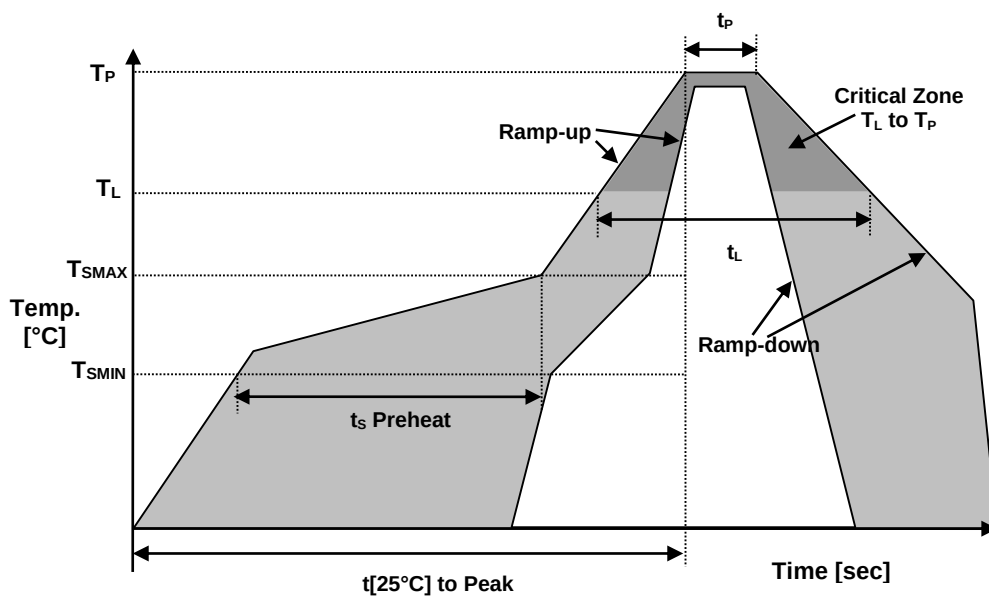
6. Common Specification

- 6.1 Load impedance is 50 Ohms.
- 6.2 Pulling is measured with 12dB return loss, all phases.
- 6.3 Package outline tolerances are typ. $\pm 0.38\text{mm}$ / $\pm 0.015\text{inch}$ if not stated differently on the drawing.
- 6.4 Product consists of glass-reinforced laminate base and nickel-silver cover; The
- 6.5 It is recommended to provide two bypass-capacitors (ceramic), from Vcc to Gnd, $1\text{nF} \parallel 100\text{pF}$.
- 6.6 Solder temperature (peak) is 260°C for 10-20s.
- 6.7 All phase noise measurements are made inside a Faraday cage and using a DC battery.

7. Outline Drawing



8.Reflow Profile



Reflow profile		
Temperature Min Preheat	T _S MIN	150°C
Temperature Max Preheat	T _S MAX	200°C
Time (T _S MIN to T _S MAX)	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	10-15 sec.
Time t[25°C] to Peak Temperature	t[25°C] to Peak	480 sec.
Time	t _L	60-150 sec.

■ ENVIRONMENTAL

PARAMETER	VALUE
MOISTURE SENSITIVITY LEVEL	1
REACH-SCHC	COMPLIANT
RoHS	6/6 LEAD FREE
TERMINATION FINISH	Au