

## RQRA-0463-0514



### 1. Product Control

Part Number	Rev	Initiated	Updated	Responsible	Spec-ID	RFQ
RQRA-0463-0514	A	10/17/2013		MH		

### 2. Mechanical Specification

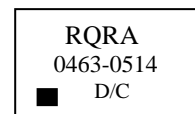
Parameter	Conditions	L_typ	W_typ	H_max	Unit
Length x Width x Height	see 6.4	12.7 (.500)	12.7(.500)	4.0(.157)	mm (inch)

### 3. Electrical Specification

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Lower Frequency <small>see 6.2</small>	Tuning Voltage: 0.5 V	fo(Vt)			463	MHz
Upper Frequency <small>see 6.2</small>	Tuning Voltage: 10 V	fo(Vt)	514			MHz
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 ohms 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 <small>see 6.3</small>	VSWR load=2:1 at all phase	df/dZL			200	KHz
Harmonic Suppression	-H2 -H3	a(n*fo)			-30 -30	dBc
Non harmonic spurious - Δf ≤ 4.0 kHz - Δf > 4 kHz					-60 -100	dBc
SSB Phase Noise at offset frequency over 0 to 55°C	Freq.Offset value:	L(df)				dBc/Hz
	1.0kHz			-90	-89	
	12.5kHz			-114	-113	
	25kHz			-125	-120	
	50kHz			-128	-127	
	100kHz			-140	-138	
	200kHz			-143	-140	
	500kHz			-147	-145	
	1MHz			-150	-145	
	>5MHz			-165	-160	

### 4. Extended Specification

### 5. Marking



Top view

## RQRA-0463-0514

Date/Product Code

### 6. 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.  $\pm 0.38\text{mm}/\pm 0.015\text{inch}$  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".

### 7. Outline Drawing

