

FMCW Transceiver

SU7636X/02

Features:

- Complete 10 GHz FMCW front end
- High performance
- Hermetically sealed
- Small size, less than 1.5" × 1.5"



Electrical Specification

Parameter	Min.	Typ.	Max.	Unit
Tuning voltage (V_t) $V_L \leq V_t \leq V_H$	0.5		9.5	V
Frequency at tuning V_L and V_H				
$V_t = V_L$	9000		11000	MHz
$V_t = V_H$				MHz
$\Delta f = f(V_H) - f(V_L)$	1700			MHz
Tuning sensitivity variation factor ($df(V_t)/dV_t * \Delta V / \Delta f$)	0.7		1.4	
Tuning current			1	mA
Modulation bandwidth	100			kHz
Tuning rate	2			GHz/ms
Output power	-6.3		1.7	dBm
Output power variation			3	dB
Output return loss	9			dB
Harmonic output ($f_0 * 2$ and $f_0 * 3$)			-20	dBc
Non-harmonics			-60	dBc
Pushing			40	MHz/V
SSB phase noise @ 100 kHz from carrier			-70	dBc/Hz
Residual FM			200	kHz _{pp}
RF to IF conversion efficiency		-17		dB
IF -1dB bandwidth	40			MHz
Bias voltage (V_b)	9.8		10.2	V
Bias current (I_b)			90	mA

Interface/Environmental Specification

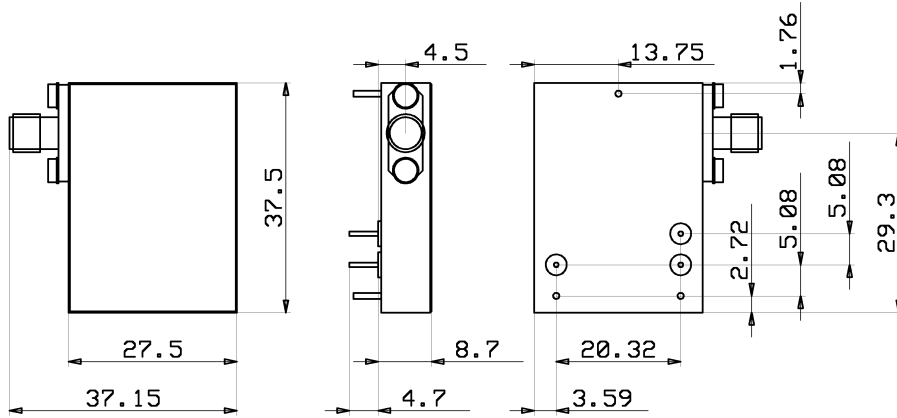
Parameter	Min.	Max.	Unit
Operational temperature range	-30	+80	°C
Storage temperature range	-50	+100	°C
Humidity	100% proof		

Data subject to change without notice.
Specification SU7636X02.doc

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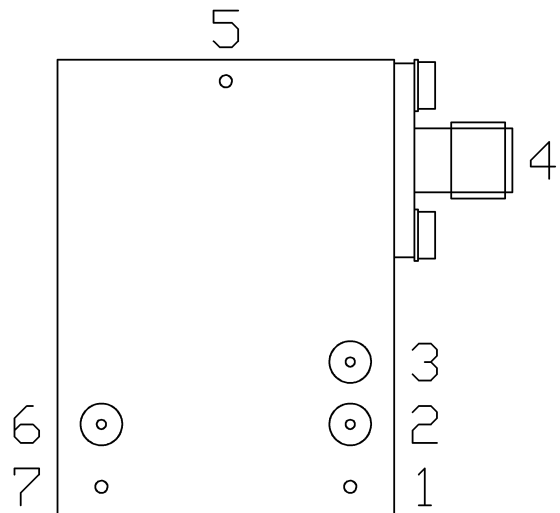
Mechanical Dimensions



Dimensions in mm

Connections

Term. #	Supply/Signal	Connector Type
1	GND	Solder pin
2	Bias	Solder pin (feed-through)
3	IF-out	Solder pin (feed-through)
4	RF	SMA
5	GND	Solder pin
6	Tuning	Solder pin (feed-through)
7	GND	Solder pin



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