LAPTECH PRECISION

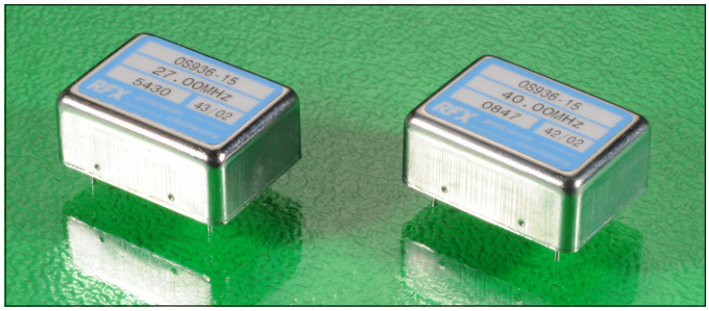
OCXO series OS936-15

Stability from ±0.005ppm, excellent phase noise from precision SC cut crystal.

Standard and custom frequency range 1MHz to 125MHz.

Ageing from ±0.1ppm first year.

A standard OCXO package providing a large volume and the finest single oven specifications.



Standard options:

frequency range:	*(1.0 ~ 125)MHz*		
accuracy codes:	*(A)*	*(B)*	*(C)*
temperature tolerance	*±0.005ppm*	*±0.01ppm*	*±0.02ppm*
temperature range	*(0 +50)°C*	*(-10 +60)°C*	*(-20 +70)°C*
output codes:	*(S)*		*(L)*
output	*sine wave, 0dBm into 50Ω*		*CMOS 15pF, 45% ~ 55%*
harmonics -30dBc max.	*<2ns max. rise and fall*		
supply voltage codes:	*(V1)**	*(V2)**	*(V3)**
supply voltage	*+3.3Vd.c.*	*+5.0Vd.c.*	*+12.0Vd.c.*
*trim reference option**	*+3.0Vd.c.*	*+4.5Vd.c.*	*+4.5Vd.c.*

** add suffix (R) for V_{ref} output on pin #5*

Generic specification:

stability:			
against supply voltage change	*±0.002ppm max. for V_{cc} ±5%*		
against load change	*±0.002ppm max. for load ±10%*		
aging short term	*±0.0005ppm max. per day*		
	after 30 days continuous operation		
aging long term	*±0.1ppm max. first year*		
voltage trim V_t	*±0.5ppm min. typical, linearity ±5%*		
trim input impedance	*100KΩ min.*		
power supplies:			
supply voltage V_{cc}	*+3.3Vd.c.*	*+5.0Vd.c.*	*+12.0Vd.c.*
start up current at min. temp. range	*900mA max.*	*600mA max.*	*300mA max.*
quiescent current at max. temp. range	*320mA max.*	*220mA max.*	*120mA max.*
warm up time	*5 minutes max. to within 0.1ppm of nominal*		
insulation resistance	*500MegΩ min., 100Vd.c.*		
phase noise:			
single sideband, 1Hz bandwidth	*-110dBc/Hz, f_o+10Hz*		
	-135dBc/Hz, f_o+100Hz		
	-155dBc/Hz, f_o+1kHz		
temperature:			
operating range	*(0 +50)°C*	*(-10 +60)°C*	*(-20 +70)°C*
storage range	*(-40 +125)°C*	*(-40 +125)°C*	*(-40 +125)°C*

Telephone: +1 905 623 4101, Fax: +1 905 623 3886
e-mail: sales@laptech.com website: www.laptech.com

ISO9001: 2008
A1511CAN

Environmental conditions:

mechanical shock:	MIL standard 202F, method 213, condition J
thermal shock:	MIL standard 202F, method 107, condition A
vibration:	MIL standard 202F, method 204, condition B
solderability:	5 seconds max. at +230°C, 3 seconds max. at +350°C

Marking:

part number and frequency on high temperature metalised polyester label

Ordering code:

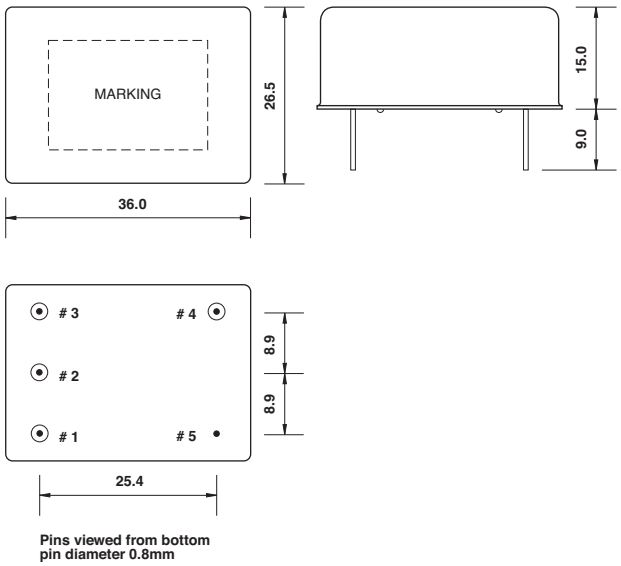
standard specification: OS936-15 A S V2* - 10.00M

OS936-15	***= series generic code***
A	temp. tol. and temp. range code: ***A = ±0.005ppm(0 +50)°C***
S	output code: ***S = sine wave output, 0dBm into 50Ω***
V2*	supply voltage code: ***V2 = +5Vd.c. supply***
**add suffix (R) for V_{ref} output on pin #2*	
10.00M	output frequenc: ***10.00M = 10.000MHz***

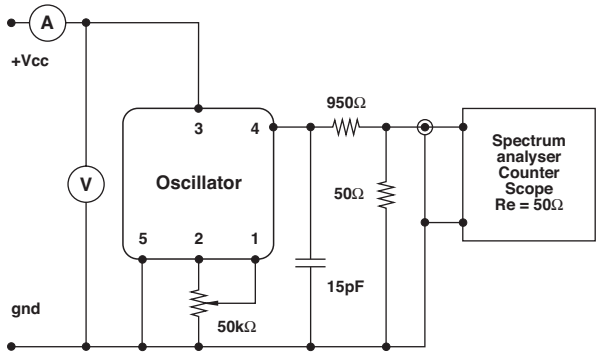
Custom specification:

part number issued with custom specification and drawing

Dimensions(mm):



Test circuit, CMOS load:



test circuit includes a 20:1 step down into a matched 50Ω load

Pin connections:

# 1	trim
# 2	n.c. or trim reference voltage*
# 3	$+V_{cc}$
# 4	output
# 5	ground/case

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