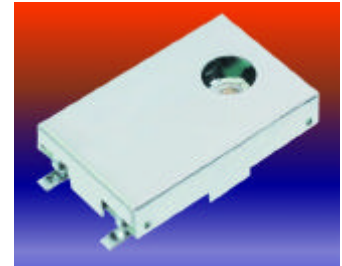


Typical Applications

PCS Base Stations
Land Mobile Radio
Cellular Telephony
Radio in the Local Loop
Digital Switching
Test Equipment

Features

Mechanical Control
EFC Optional
Standard Surface Mount Package
Wide Temperature Range
High Stability



Frequency Range

10 MHz – 33 MHz

Standard Frequencies

10; 13; 16.384; 19.44; 20; 25.92 MHz

Frequency stabilities

Parameter	Code I	Frequency stability	Operating temp range
vs. Operating temperature range	07	± 2.0 ppm	-40....+85°
	08	± 1.0 ppm	
	03	± 2.0 ppm	-20....+70°C
	04	± 1.0 ppm	
	05	± 1.0 ppm	0....50°C
	06	± 0.5 ppm	
Parameter	Value		Condition
vs. Supply voltage change	$< \pm 0.2$ ppm		$V_s \pm 5\%$
vs. Load change	$< \pm 0.2$ ppm		Load $\pm 10\%$
vs. Aging / year	$< \pm 1.0$ ppm		

Frequency tuning

Parameter	Option I	Value	Condition
Mechanical (No EFC)	Blank	$> \pm 3.0$ ppm	(internal trimmer)
Electrical freq. control (EFC)	U	$> \pm 5.0$ ppm	Note 1
Voltage range (Vc)		0.5 to 4.5 V	@ $V_s = 5.0$ V
		0.3 to 3.0 V	@ $V_s = 3.3$ V
Pulling slope		positive	
Freq. control input impedance		> 10 k Ω	

RF output

Parameter	Code III	Value	Condition
Signal Load	06	HCMOS 25pF $\pm 10\%$ 15pF $\pm 10\%$	< 20 MHz ≥ 20 MHz
Duty cycle		40/60%	@ $V_s/2$
Signal Load	07	Clipped sinewave 10k $\Omega \pm 10\% 10$ pF $\pm 10\%$	@ 5.0 V ; 10k $\Omega 10$ pF @ 3.3 V ; 10k $\Omega 10$ pF
Output power		> 1 V _{PP} > 0.7 V _{PP}	

Supply Voltage

Parameter	Code II	Value	Condition
Supply voltage (V_s)	05	5V $\pm 5\%$	Clipped Sinewave HCMOS
Current consumption		< 3 mA < 12 mA	
Supply voltage (V_s)	33	3.3 V $\pm 5\%$	Clipped Sinewave HCMOS
Current consumption		< 3 mA < 6 mA	

Additional parameters

Parameter	Value	Condition	
Phase Noise	<- 95 dBc/Hz	10 Hz	Note 2
	<-130 dBc/Hz	100 Hz	
	<-140 dBc/Hz	1 kHz	
	<-150 dBc/Hz	10 kHz	
	<-150 dBc/Hz	100 kHz	
Weight	< 4 g		
Operable temperature range	-40 ... +90°C		
Storage temperature range	-55 ... +105°C		
Processing & Packing	handling&processing note		

Enclosure

Type

G158A

Drawing

Technical drawing of the G158A enclosure. The top view shows a rectangular case with four pins labeled 1, 2, 3, and 4. A central circular feature is shown. Dimensions include a width of 18,5 max., a height of 12 max., a pin spacing of 4,2, and a distance of 4,9 ±0,3 from the center to the pin. The side view shows the height H ±0,2 and a mounting flange (Auflage fläche) with a tolerance of 0,25 S. A detail view shows a tolerance of 0,15 S.

G158

H = 5,3 ; G158 A

Technical drawing of the G158 enclosure. The top view shows a rectangular case with four pins labeled 1, 2, 3, and 4. A central circular feature is shown. Dimensions include a width of 21,2 ±0,3, a height of 7,5 ±0,1, a pin spacing of 1,27 ±0,2, and a distance of 3,7 ±0,2 from the center to the pin. The side view shows the height H ±0,2 and a mounting flange (Auflage fläche) with a tolerance of 0,25 S. A detail view shows a tolerance of 0,15 S.

all units in mm

Pin Connections

Pin 1	N.C.
Pin 1	Control Voltage (V _c)
Pin 2	GND, case
Pin 3	RF output
Pin 4	Supply Voltage (V _s)

Option U

Mechanical freq. Control

Electrical and mech. freq. Control

Ordering Code	Option I Frequency tuning	Code I Frequency Stability	Code II Supply Voltage	Code III RF Output	Frequency
Example: Order: TQSMT	U	04.	05.	07.	10M00000
TQSMT					

Notes

- Others available; Option "U" includes the mechanical frequ. control
- Typical values @ 10 MHz
Unless otherwise stated all values are valid after warm-up time and refer to typical conditions for supply voltage, frequency control voltage, load, temperature (25°C)
Subject to technical modification; Not all options are available at all Frequencies