

Typical Applications

*PCS Base Stations
Cellular Base Stations
Synthesizers
Test Equipment
Digital Switching*

Features

*Standard Package
Low Aging
Fast Warm-Up
SC-Cut Crystal*



Frequency range

5 MHz – 30 MHz

Standard frequencies

10 MHz

Frequency stabilities

Parameter	Code	Frequency stability	Operating temp range
vs. operating temperature range	B69	± 6 ppb	0....50°C
	B49	± 4 ppb	
	C79	±7 ppb	0.....70°C
	C38	± 5 ppb	
	D28	± 20 ppb	-20....+70°C
	D18	± 10 ppb	
	E38	± 30 ppb	-40....+70°C
	E28	± 20 ppb	
Parameter		Value	Condition
vs. aging /daily ¹		< ± 0.5 ppb	after 72 hours of operation
vs. aging /1 Year		< ± 0.05 ppm	

Frequency tuning

Parameter	Value	Condition
Electrical frequency control (EFC):	± 0.75 ppm Typ.	Sufficient for > 15 Yrs.
Voltage range	0 V to 5 V	
Pulling slope	Positive	

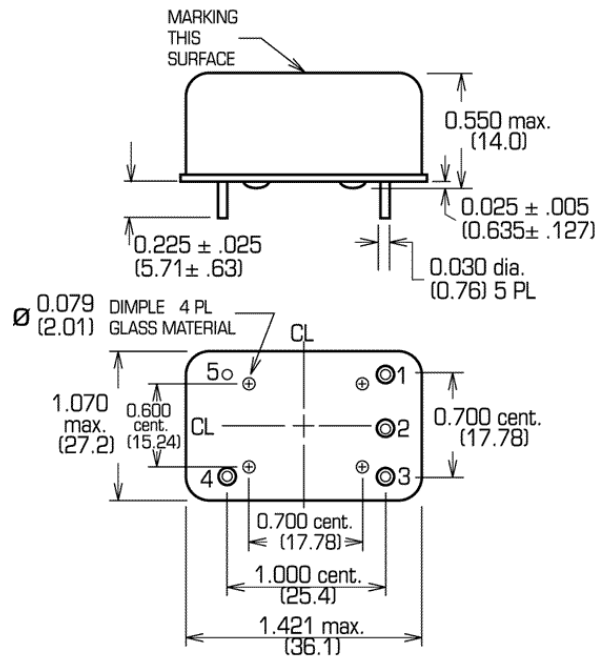
RF output

Parameter	Value	Condition
Signal	Sinewave/ HCMOS ²	
Load	50Ω	
Output power min	+ 3 dB/Veff/dBm	
Output power max	+ 8 dB/Veff/dBm	
Harmonics	< - 30 dBc	

Supply Voltage

Parameter	Value	Condition
Supply voltage (Vs)	+ 12 V	@ 25°C
Current/power consumption steady state	< 1.2 mA/W	
Curr./power consumption during warm up	< 6.0 mA/W	
Reference Voltage output	5 V	

Enclosure



Pin Connections

Pin	1	EFC
Pin	2	Reference Voltage Output or N/C
Pin	3	Supply Voltage
Pin	4	RF Output
Pin	5	GND/Case GND

Additional Parameters

Parameter	Value @ 10 MHz ¹	Value @ 25 MHz ²	Condition
Phase Noise	<- 85 dBc <-110 dBc <-140 dBc <-145 dBc <-145 dBc	<- 85 dBc <-110 dBc <-140 dBc <-145 dBc <-150dBc	1Hz 10Hz 100Hz 1kHz 10kHz
Warm-up time		< 5 min	@25°C to 24-hour frequency within ± 0.1ppm
Processing		Tech_Note_1	
Packaging		Tech_Note_2	

Notes

- 1 Typical values @ 10 MHz
- 2 Typical values @ 25 MHz
- 3 Can drive TTL, ACMOS and CMOS
- 4 Oven monitor alarm available

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)