

Typical Applications

SONET/SDH Transmission Systems

Features

Low Profile, Compact Package
 Stratum 3E Performance
 SC-Cut Crystal



Description

The C4550A2-0275 has been designed to meet the Holdover requirements for a Stratum 3e Clock source as called out in GR-1244-CORE, per Table 3-1 as described in Sections 5.2 and 9.1.

Nominal Frequency:

20.000 MHZ

Initial Accuracy (Time of Shipment) :

± 1.5 ppm @ Time of Shipment

Frequency stabilities

Parameter	Value	Condition
vs. operating temperature range	± 10 ppb	-40°C to +85°C
vs. supply voltage	$< \pm 2$ ppb	1% change in voltage
vs. short-term	1e-11/sec	Allan Variance 1 sec Tau
vs. holdover / Day	$< \pm 1$ ppb	$< \pm 3^\circ\text{C}$ change in 24hrs
vs. aging / 20 Years	$< \pm 2.0$ ppm	

RF output

Parameter	Value	Condition
Waveform	HCMOS	
Load	15 pF	
Duty Cycle	45/55%	@ 50% level
Rise/Fall Time	<10nSec	10% to 90% level

Supply Voltage

Parameter	Value	Condition
Supply voltage (Vs)	+3.3VDC $\pm 10\%$	
Power consumption steady state	< 1.5 watts	@ 25°C
Power consumption during warm up	< 3.3 watts	

Additional Parameters

Parameter	Value	Condition
Phase Noise	< -130 dBc/Hz < -145 dBc/Hz < -150 dBc/Hz < -150 dBc/Hz	100Hz 1KHz 10KHz 100KHz
Warm-up time	< 3min	@25°C to final frequency (1 Hour) within ± 0.1 ppm

ADEV	7e-12 8e-12 20e-12 60e-12	1sec tau 10sec tau 100sec tau 1000sec tau
TDEV	5e-12 50e-12 600e-12 3000e-12	1sec tau 10sec tau 100sec tau 1000sec tau

Notes

- 1 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)
- 2 This is a Zarlink custom part – restricted for Zarlink customers

