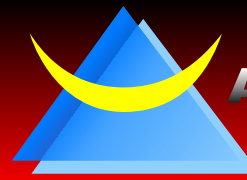


TFS2 SERIES

- VCTCXO
- HCMOS, Sinewave, Clipped Sine
- 1.000MHz to 160.000MHz
- Stability Down to ± 1 ppm



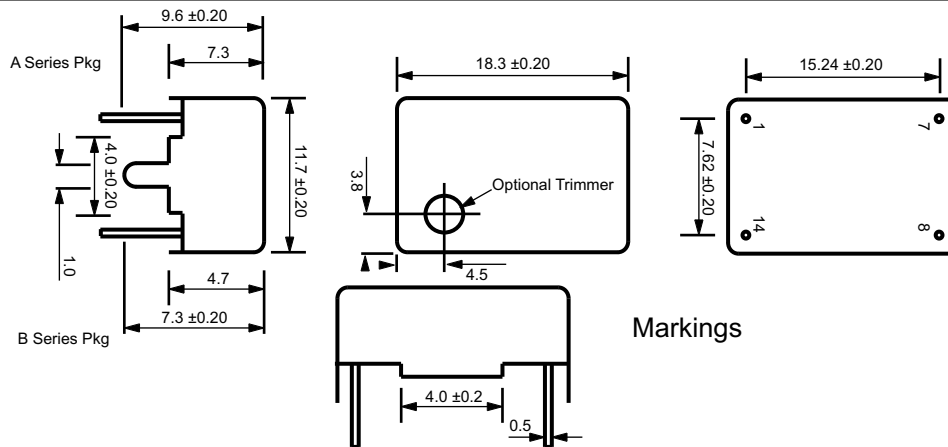
ASCEND

FREQUENCY DEVICES

Electrical Specifications

Frequency Range:	H Option = HCMOS Output S Option = Clipped Sine Output Z Option = Sinewave Output	1.000MHz to 160.000MHz 8.000MHz to 160.000MHz 8.000MHz to 160.000MHz
Frequency Stability:	vs. Aging = ± 1 ppm per year max. vs. Voltage (with a 5% change) = ± 0.3 ppm vs. Load (with a 10% change) = ± 0.3 ppm	± 1.0 ppm to ± 5.0 ppm
Output Load:	H Option or S Option Z Option	10K Ohms // 15pF 50 Ohms
Supply Current:	H Option S Option Z Option	35mA Maximum 3mA Maximum 5mA Maximum
Output:	H Option S Option Z Option	Logic "1" Level = 0.9Vdd Minimum; Logic "0" Level = 0.1Vdd Maximum 1.0V p-p Minimum 7dBm Minimum
Operating Temperature Range:	-	0°C to +50°C to -40°C to +85°C
Storage Temperature Range:	-	-40°C to +85°C
Supply Voltage (Vdd):	-	2.8 - 3.3Vdc or 5.0Vdc $\pm 5\%$
Internal Trim (Top of Can)	-	± 3 ppm Minimum
Control Voltage:	Vdd = 3.3V Vdd = 5.0V	1.65Vdc ± 1.5 Vdc (Positive Slope) 2.5Vdc ± 2.0 Vdc (Positive Slope)
Symmetry:	at 50% of waveform with HCMOS Load	40%/60%
Pad 1 Connection:	Blank Option	No Connect (Blank Option); ± 10 ppm Minimum (V Option)

Mechanical Dimensions



Pin	FUNCTION
1	N/C or Control Voltage
7	Case Ground
8	Output
14	Supply Voltage

MARKING

Line 1: Ascend
Line 2: XX.XXXX
("R" Denotes RoHS Compliance)
Line 3: XXXXXX (Date Code)

ALL DIMENSIONS
IN MILLIMETERS

Part Numbering Guide

TFS2 A 3 H 15 D V T - 160.000M

Series

14 Pin Dip TCXO

Package Option

A = A Series (7.3mm Height)
B = B Series (4.7mm Height)

Supply Voltage

3 = 3.3V
5 = 5.0V

Output Type

H = HCMOS, C = Clipped Sinewave, or Z = Sinewave

Frequency Stability*

10 = ± 1.0 ppm
15 = ± 1.5 ppm
20 = ± 2.0 ppm
25 = ± 2.5 ppm
30 = ± 3.0 ppm
35 = ± 3.5 ppm
50 = ± 5.0 ppm

* Check with factory for additional Stability vs. Temperature options

Frequency

Trimmer Option

Blank = No Trimmer
M = Mechanical Trimmer

Pin 1 Connection

Blank = No Connect
V = Voltage Control

Operating Temperature Range

A = 0°C to +50°C
B = -10°C to +60°C
C = -20°C to +70°C
D = -30°C to +75°C
E = -30°C to +80°C
F = -40°C to +85°C
G = 0°C to +70°C