

HIGH PERFORMANCE SYNTHESIZER

MODEL:MTS300950DS

OCTAVE TUNING BANDWIDTH 300 - 950 MHz

Standard Features:

- » Over an octave bandwidth tuning
- » Small step resolution (as low as 1 Hz)
- » Fast lock settling after frequency changes
- » Very stable in stringent vibration environments
- » Low phase noise
- » Easily programmable format
- » Possible to read frequency on the interface port
- » Outstanding spectral purity
- » High spurious rejection

SPECIFICATIONS:

Frequency Range:	300 - 950 MHz	Harmonic Suppression:	20 dBc (Min)
Bandwidth	650	Phase Noise:(Max)	
Internal Reference Output:	10 MHz	@ 10 Hz offset	-80 dBc/Hz
Phase Noise:		@ 100 Hz offset	-94 dBc/Hz
@ 10 Hz offset	< -110 dbc/Hz	@ 1 kHz offset	-101 dBc/Hz
@ 100 Hz offset	< -130 dbc/Hz	@ 10 kHz offset	-104 dBc/Hz
External Reference Input:	13 MHz	@ 100 kHz offset	-125 dBc/Hz
Resolution:	1 Hz	@ 1 MHz offset	-145 dBc/Hz
Relative Precision:	< 74×10^{-12}	Settling Time:	
Bias Voltage:	VCC = +13 VDC ($\pm 3V$) @ < 800 mA	Per Programming Step:	< 15 mSec
Bias Voltage Ripple:	100 mV p-p (Max)	After Turn-on:	< 1 Sec
RF Output Power:	+12 dBm (± 2.0 dB)	Operating Temperature Range:	0 to +50 °C
When Unlocked:	< -20 dBm	Non-Operating Temperature Range:	-20 to +50 °C
Spurious Suppression:	-70 dBc (Typ) / -65 dBc (Max)		

Programming Interface: SPI comes standard, see other available interface options.

Loading is frequency in Hz, hex format, MSB loaded first.

Available options:

- » Internal Reference
 - OCXO, temp. stability $\pm 2 \times 10^{-8}$, aging first year $\pm 1 \times 10^{-7}$, operating temperature -10 to + 50 °C (current consumption increases to 1.6 Amps. during warm-up).
 - TCXO, temp. stability $\pm 1.5 \times 10^{-6}$, aging first year $\pm 2 \times 10^{-6}$, operating temperature -10 to + 50 °C.
- » Reference Controller (synchronized to external reference 1pps (pulse per second) and one other frequency from 1 MHz to 400 MHz).
 - No impact on output signal phase noise
 - Electronic adjustment of reference frequency in unlocked mode
 - Automatic switching from internal to reference control
- » Interface Control Options
 - SPI standard
 - RS232 inverted TTL
 - RS232
 - I²C
 - USB
- » 2.4 GHz reference output
- » External reference input from front panel
- » External reference input: 10 to 120 MHz
- » Reference output (10 MHz) on front panel

Other standard frequency ranges becoming available:

1 to 2 GHz & 2 to 4 GHz upon request



This product is manufactured under one or more of the following patents:
Approved: 5,160,810; 5,122,621; 5,390,349; 5,416,449; 5,650,754; 5,805,431; 6,525,623; 6,850,575; 7,088,189; 7,180,381
Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823;
60/605791; EV31369834; 11/259766; 60/622485 & 60/710310; 10/937525/60/736901; 60/732787
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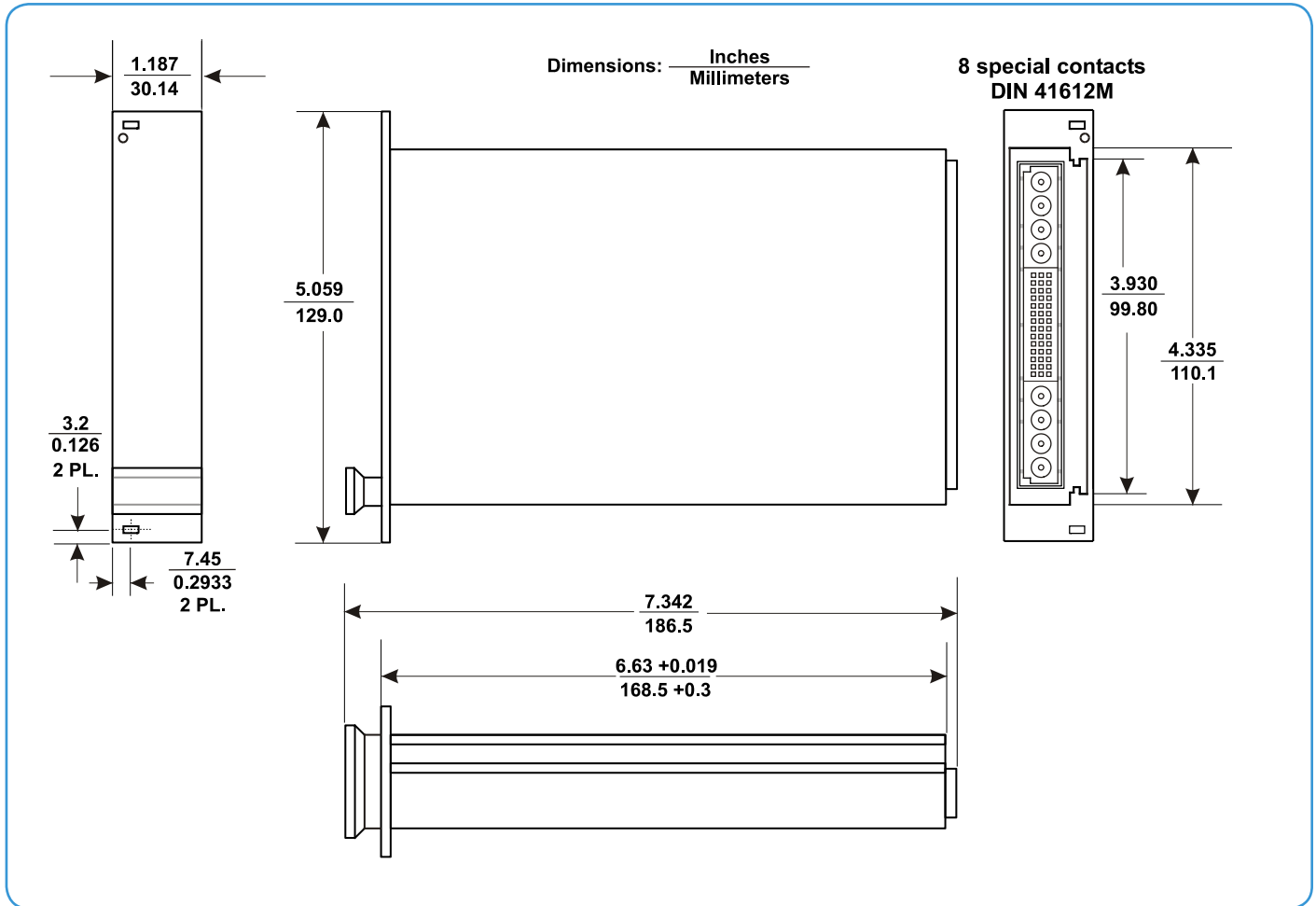


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MECHANICAL OUTLINE: 279



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