*i*MPT-1007-TC

Multi-Purpose Tuner

General

Multi-Purpose tuners (MPT) use three independent wideband probes allowing independent control of the amplitude and phase of the reflection factor at all three harmonic frequencies. In the MPT, all probes are wideband and it is the proper combination of the three reflection vectors that allows independent tuning at the three harmonic frequencies. The MPT's main application is harmonic load pull. With a click of the mouse you can switch from one frequency to the other without mechanical intervention or recalibration. MPT's can also be used as single probe tuners as well as high VSWR prematching tuners. The ultra-stable (fundamental only) mode of operation is a necessity for on-wafer vibration-free testing and is accomplished by moving the probes only vertically. MPT option "TC" (twin carriage) allows wideband operation up to one Decade (fmax/fmin=10:1).

Specifications

Frequency Range (f_0 - $3f_0$, GHz).....0.7 - 10

VSWR (stable tuning) ..... 50:1[1]

VSWR (harmonic tuning) ..... 10:1-100:1[2]

VSWR (High VSWR tuning) ..... 80:1[1]

Insertion Loss - N Connector (dB)..... 0.53

Insertion Loss - 7mm Connector (dB) 0.46

Repeatability (min, dB) ..... - 40

Repeatability (typical, dB) ..... - 50

Step Size (carriage, µm) 25.4

Phase Resolution @ 0.7 GHz ..... 0.043° /step

Phase Resolution @ 10 GHz ..... 0.610° /step

Step Size (probe, µm) 1.5

Tuner Weight (lbs) 45

Shipping Weight (lbs) ..... 60[3]

Size ..... See ***Dimensions***

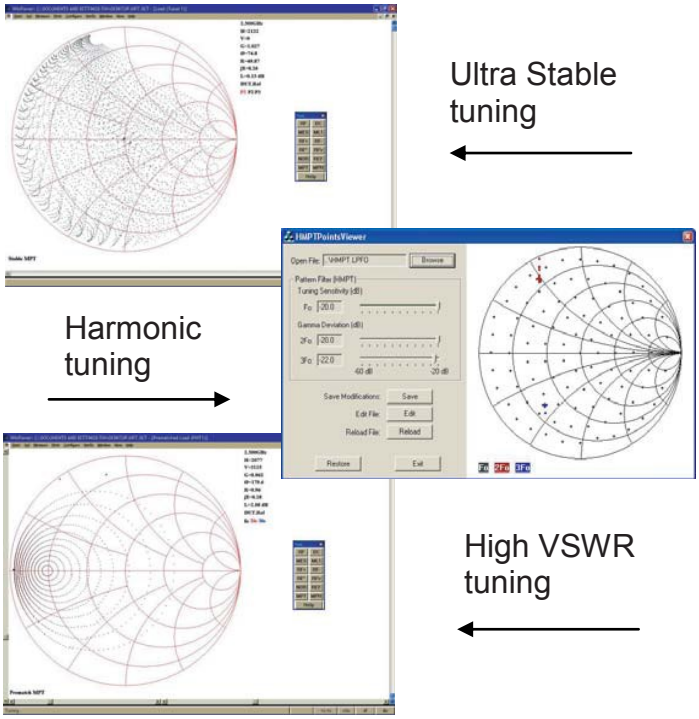
Tuning Type	Probes used	Movement	Frequencies	TUNE_TO...
Single Slug	1	Hor & Vert	Fund (fo)	Continuous*
High VSWR	2	Hor & Vert	Fund (fo)	Continuous*
Ultra Stable	3	Vertical	Fund (fo)	Continuous*
Multi-Harmonic	3	Hor & Vert	fo, 2fo and 3fo	Continuous & Calibrated**

* Continuous tuning to all impedances within tuning range

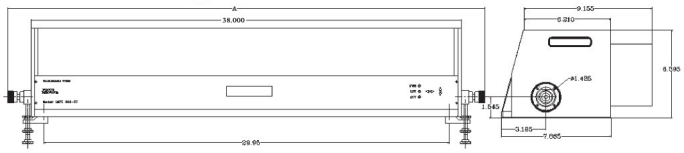
** Calibration patterns can be freely defined by the user at any fundamental and harmonic frequency at DUT reference plane

Model	Connector Type	Power Handling (W, CW)[4]	Length A (in)
iMPT-1007-TC	APC-7	30	41.48
iMPT-1007-TC-N	N	90	42.13

Typical Tuning Point Distribution



Dimensions



Power Supply Specifications

Input (AC) 100-240V, 1.8A
Output (DC) 12V, 5A

[1] Measured at 0.7 GHz
[2] Measured at 0.7 GHz for Γ (2Fo, 3Fo) = 0.9
[3] Includes packaging and accessories, may vary
[4] Measured at 10:1 VSWR

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iMPT-1007-04292013