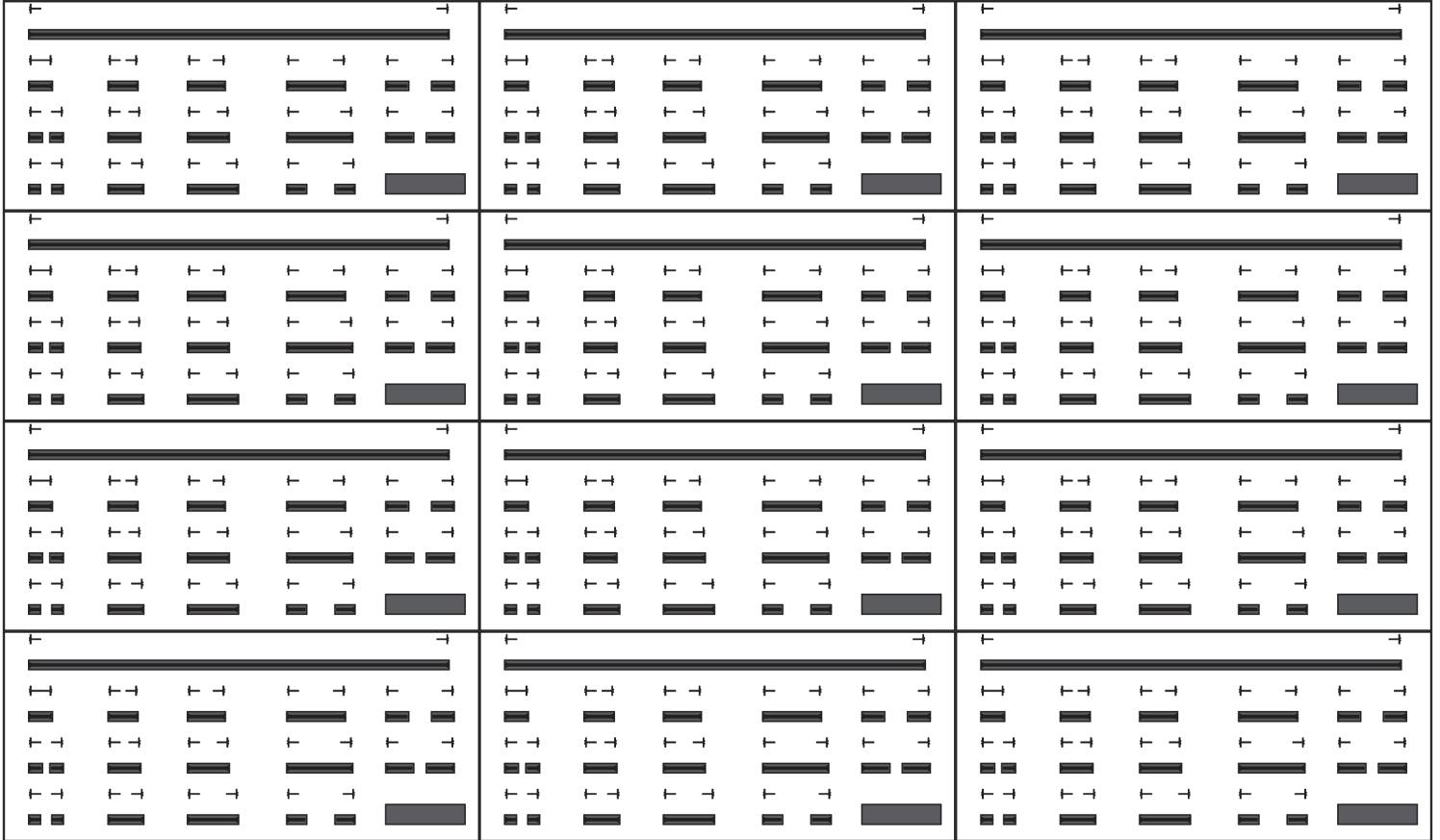


Cascade Impedance Standard Substrate Map

➤ Multiline TRL Calibration Substrate

Pitch: 50 μm , Frequency: WR-2.2 – WR-5.1, Configuration: Ground-Signal-Ground

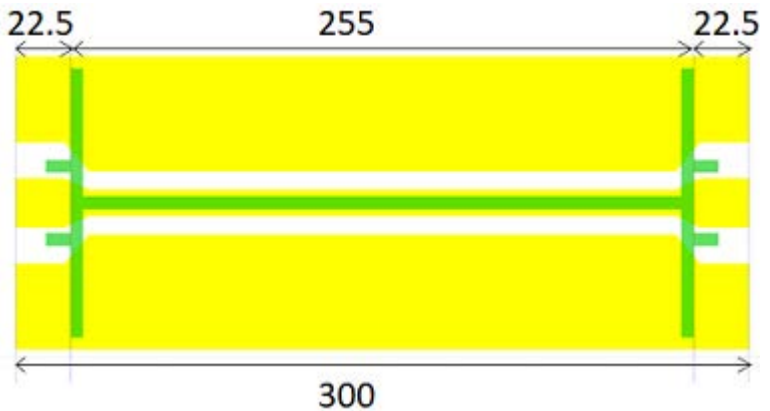
P/N: 172-886



Calibration Sites: 12 Site Spacing: 6000 μm x 2650 μm

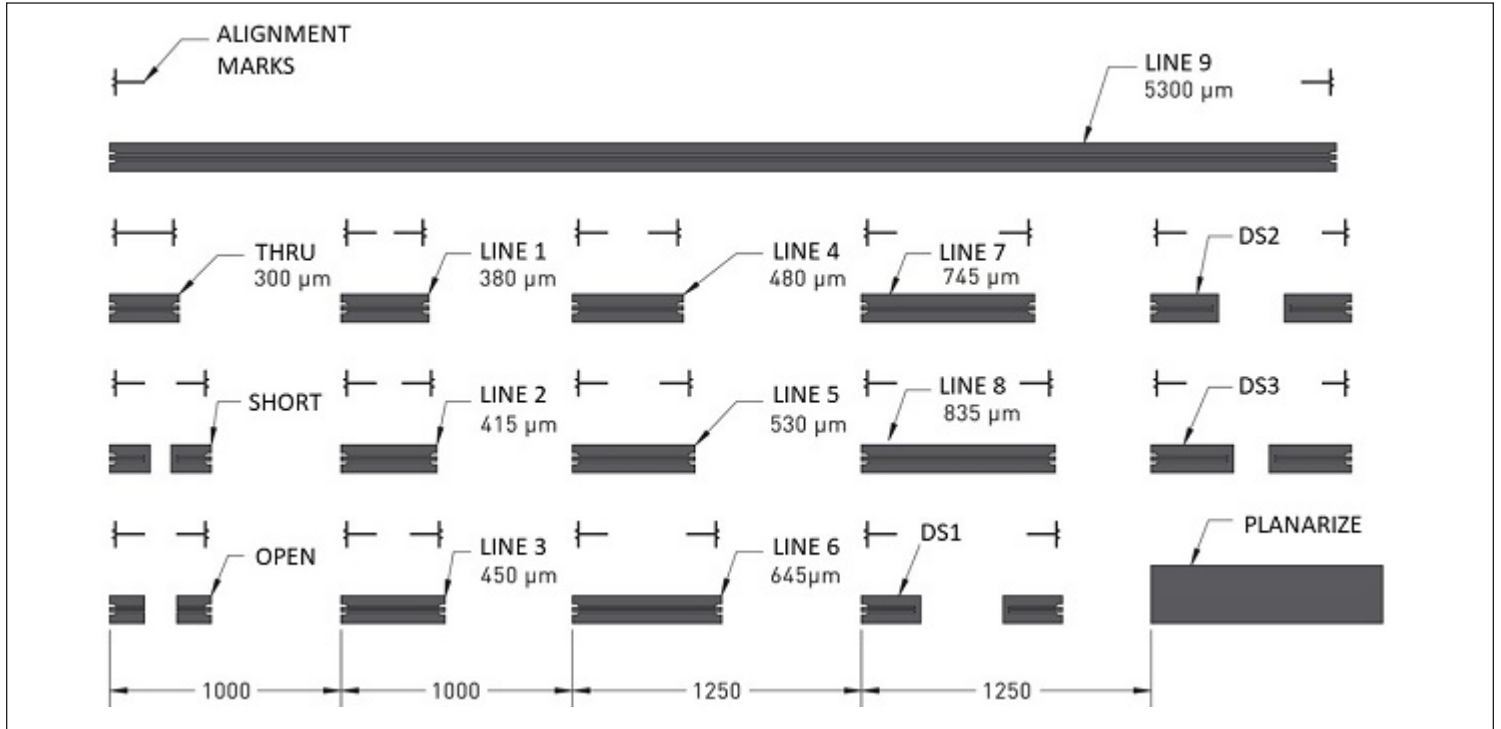
Overlay of Alignment Mark and THRU standard, showing the conductor edge to-edge length (300 μm) and Tip-to-Tip length (255 μm)

Lines	Conductor Length [um]	Tip-to-Tip Length [um]
THRU	300	255
LINE1	380	335
LINE2	415	370
LINE3	450	405
LINE4	480	435
LINE5	530	485
LINE6	645	600
LINE7	745	700
LINE8	835	790
LINE9	5300	5255



Key to Map

West Probe Fixed Index Step: 1000/1250 μm (as shown) x 650 μm , Alignment Mark Offset: 325 μm Step North



Note: Line lengths are specified as conductor edge-to-edge dimension.

SPECIFICATIONS

Substrate Material: High-resistivity Silicon, **Substrate Thickness:** 275 μm , **Dielectric Constant:** 11.8, **Nominal Line Z_0 :** 50 Ohm

OVERTRAVEL AND ALIGNMENT

Prior to contacting the calibration standards, alignment and overtravel should be set using the alignment marks. On initial contact, the leading edge of the probe contacts should be aligned with the outmost edge "A" of the alignment mark, shown in Figure 1. To reach final contact, overtravel should be increased until the leading edge of the probe contacts is aligned with the innermost edge "B" of the alignment mark, shown in Figure 2.

Note: Calibration substrate must be mounted on an absorber material (such as ISS Holder P/N 116-344).

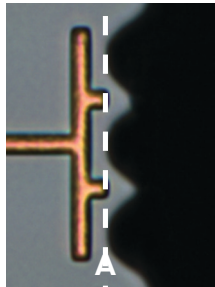


Figure 1: Initial contact

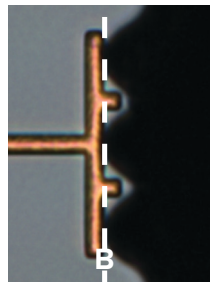


Figure 2: Final contact

RECOMMENDED LINE CONFIGURATIONS

Band	WR-2.2 (325 - 500 GHz)	WR-3.4 (220 - 330 GHz)	WR-4.3 (170 - 260 GHz)	WR-5.1 (140 - 220 GHz)
Lines	Thru Line 1 Line 5	Thru Line 2 Line 6	Thru Line 3 Line 7	Thru Line 4 Line 8

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