

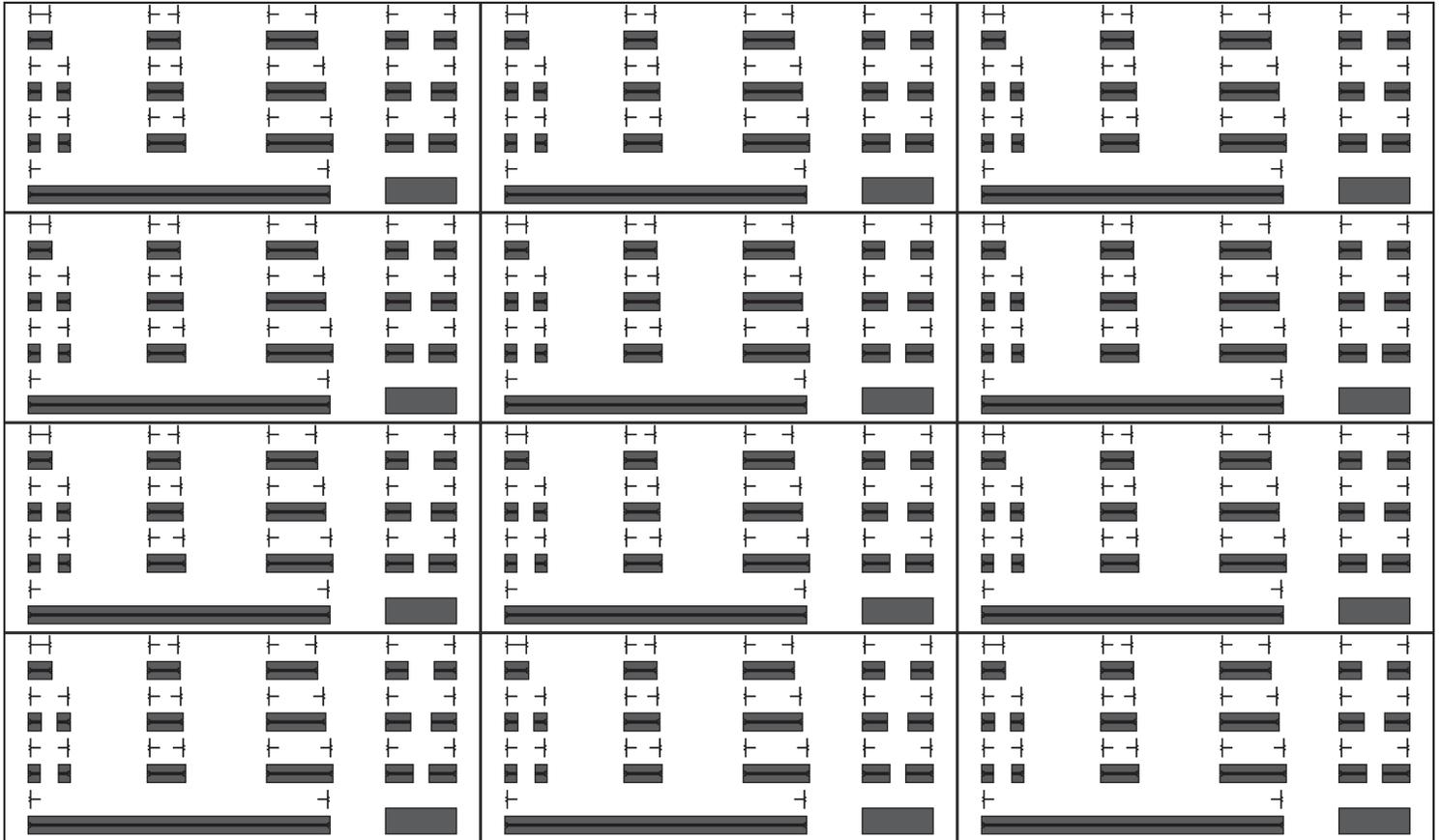
Cascade Impedance Standard Substrate Map

000111100010

➤ Multiline TRL Calibration Substrate

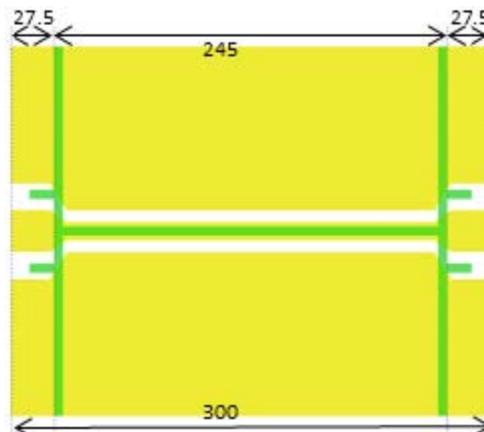
Pitch: 75 - 100 μm , Frequency: WR-3.4 – WR-5.1, Configuration: Ground-Signal-Ground

P/N: 172-887



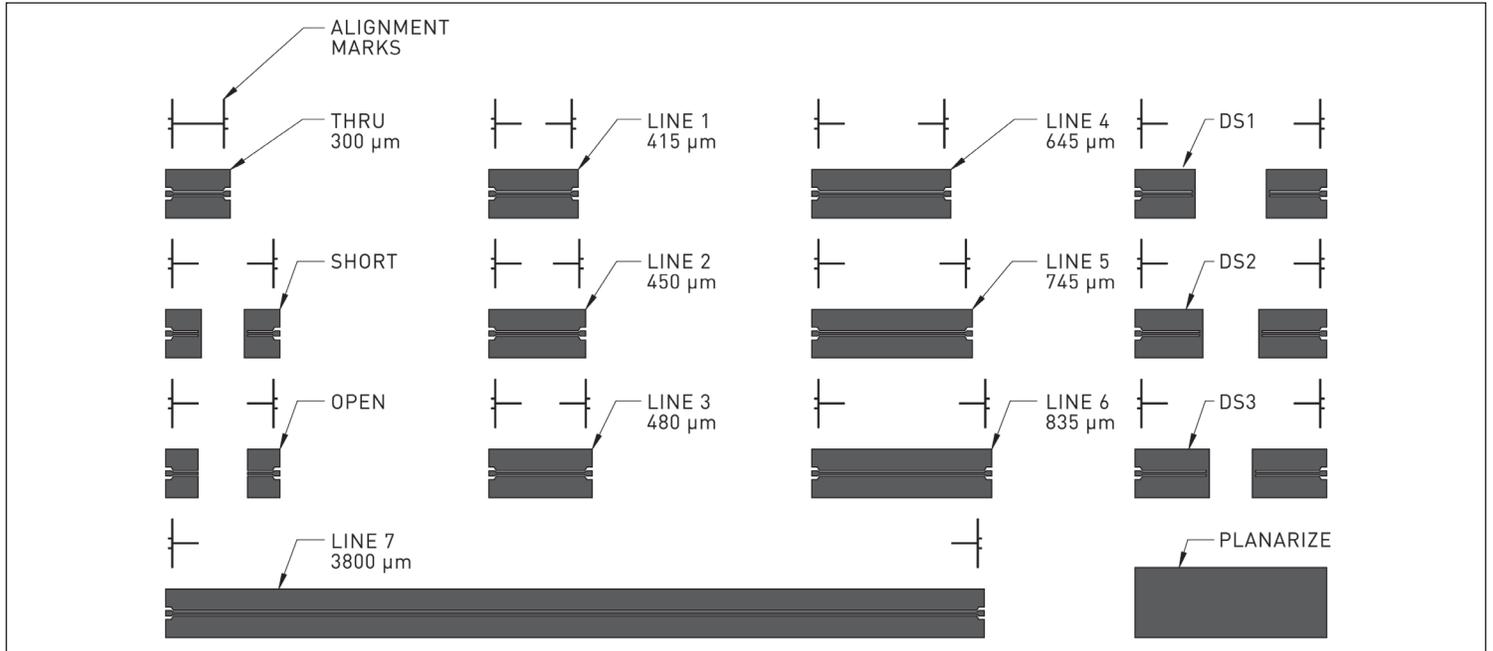
Calibration Sites: 12 Site Spacing: 6000 μm x 2650 μm

Lines	Conductor Length [um]	Tip-to-Tip Length [um]
THRU	300	245
LINE1	415	360
LINE2	450	395
LINE3	480	425
LINE4	645	590
LINE5	745	690
LINE6	835	780
LINE7	3800	3745



Overlay of Alignment Mark and THRU standard, showing the conductor edge to edge length (300 μm) and Tip-to-Tip length (245 μm)

West Probe Fixed Index Step: 1500 μm 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).

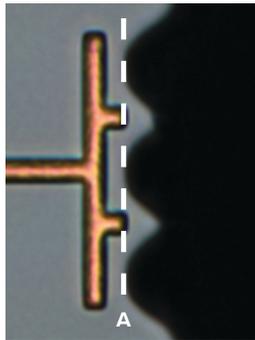


Figure 1: Initial contact

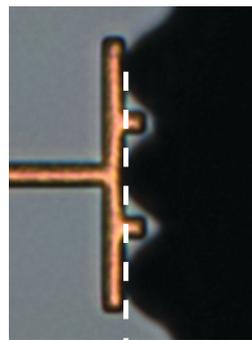


Figure 2: Final contact

RECOMMENDED LINE CONFIGURATIONS

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

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