



QUAD-RIDGE TO DOUBLE-RIDGE TRANSITIONS

DATA SHEET No. T403

- LOW VSWR
- LOW INSERTION LOSS

OVERVIEW

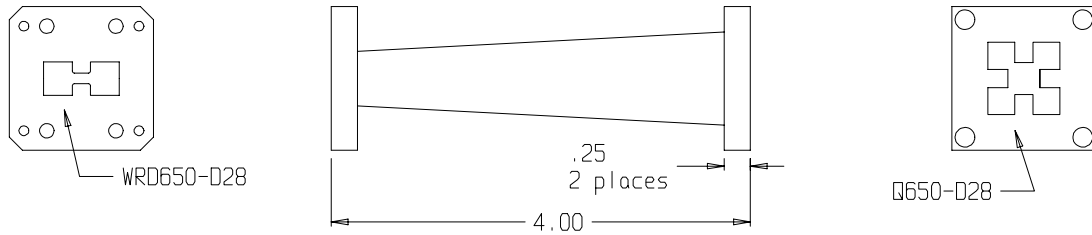
Quad-ridge transmission line combines the broad frequency bands of double ridge waveguide with the ability to transmit two independent, orthogonally polarized waveguide modes. These modes can be used alone or in any combination of amplitude and phase. This property is useful for many antenna applications as it allows polarization diversity and more efficient use of the frequency spectrum by using left and right circular polarizations.

Currently, MEC has developed two main frequency bands, Q650-D28 covering 7.5 to 18 GHz and Q250-D30 covering 2.5 to 7.5 GHz. These roughly parallel the double ridge waveguide bands for WRD650 and WRD250.

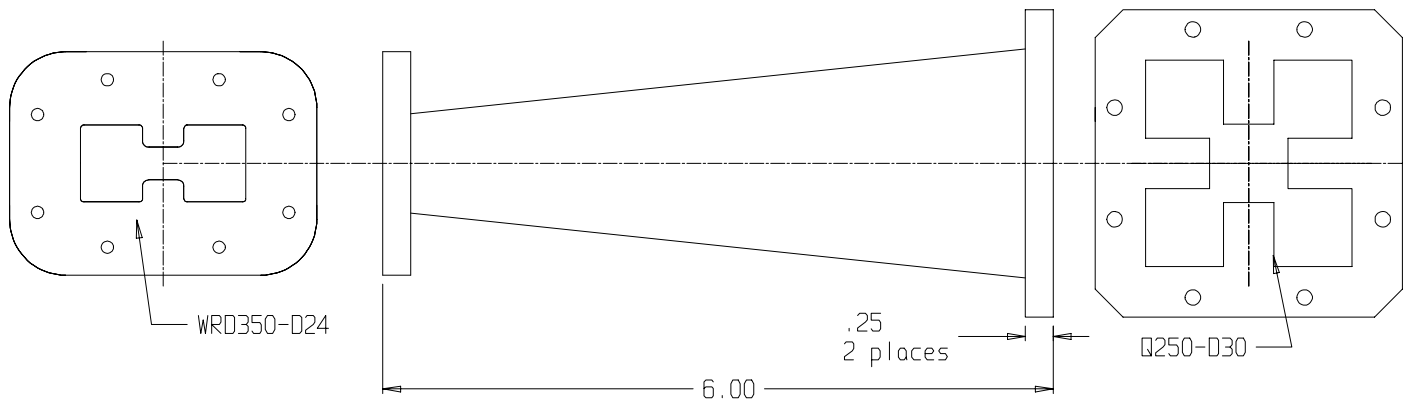
DESCRIPTION

These precisely machined transitions allow connection between quad-ridge waveguides and double-ridge waveguides with low insertion loss and good match. In the overlapping frequency band common to both waveguides, VSWR is 1.06:1 max.

Material is aluminum. Finish is chromate conversion per MIL-C-5541, Class 3, painted with gray epoxy enamel. Other lengths, bands and types may also be requested.



Q37, 7.5 to 18 GHz



Q32, 2.5 to 7.5 GHz

