

Cross coupled transistor bridge

THIS circuit shows a full wave rectifying bridge which has an off-set voltage an order smaller than conventional diode bridges.

The graph shows transfer characteristics for a conventional full wave silicon diode bridge in curve 1, a germanium diode bridge in curve 2, and the cross coupled transistor bridge in curve 3. The off-set voltage of the transistor bridge is about 30mV with good linearity above the knee.

The circuit was developed for use in a simple but sensitive field strength meter. The meter is protected by the base-emitter junctions of the transistors. With the devices shown, the frequency response is up to 30MHz and the optimum value of R_L is about 2k Ω .

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