

AbstractUHF RF SIGNAL INPUT CIRCUIT

An RF signal input circuit for a UHF tuner of a television receiver comprises a series-tuned circuit (10) including a varactor diode (14) and an inductance element (13b) connected in series, in the order named, between signal ground and a gate electrode (G1) of a field-effect transistor RF amplifier (21). The series-tuned circuit has a relatively uniform bandwidth throughout the UHF range. A capacitor (18) connected in shunt with the gate electrode (G1) completes a "split-capacitor" configuration in which the varactor diode (14) and the shunt capacitor (18) form a variable impedance transformation network for making the relationship between the effective impedances of the series-tuned circuit and FET amplifier relatively uniform throughout the UHF range.

The order of the varactor diode (14) and inductance element (13b) allows a low cost adjustable capacitor (19a) comprising a grounded shield wall (203) as one plate and a moveable tab (309) as a second plate to be connected directly across the varactor diode (14).