

Title (en)
Antenna arrangement

Title (de)
Antennenanordnung

Title (fr)
Agencement d'antenne

Publication
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Application
EP 95120130 A 19951220

Priority
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Abstract (en)
A novel multiplex system is disclosed which overcomes the disadvantage of a parasitic diode which occurs upon use of MOS FET switches to switch between channels. A preferred embodiment of the invention is effected by connecting the power MOS FET 18,20 to the antenna 10,12 via a serially connected capacitor 14,16. Thus, in a disabled channel, the serially connected capacitor 14 may be charged up to the peak positive D.C. voltage of the antenna resonator circuit 24 of the enabled channel, via the parasitic diode. The capacitor 14 in the disabled channel is charged via the parasitic diode while a different transmit channel has been selected and when the antenna resonator 24 of that different channel, builds up the antenna resonance voltage. Once the voltage at the antenna resonator 24 is at the maximum, the capacitor 14 in the disabled channel is also charged up to the maximum voltage and therefore, the antenna resonance voltage of the enabled channel minus the stored voltage of the disabled channel capacitor 14 will never be less than zero. In conclusion, because the drain of the FET is held to a positive voltage, and the parasitic diode needs a negative voltage to conduct, the parasitic voltage stops conducting and will not conduct while the capacitor is charged to that positive voltage. Therefore, the FET is blocked to negative voltages. The disabled MOS FET 18 is also blocked for positive voltages because that is the basic function of the MOS FET switch 18. The parasitic diode is not conducting in this situation, because the diode is reversed biased in this case and therefore needs a negative voltage to conduct. <IMAGE>

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