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**Smit et al.**

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(54) **INTEGRATED CIRCUIT DEVICE HAVING A SELF-BIASED, SINGLE PIN RADIO FREQUENCY SIGNAL INPUT**

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(57) **ABSTRACT**

A radio frequency transponder device in an integrated circuit package requires only one dedicated pin for connection to a parallel resonant tuned circuit for receiving a remote signal. The one dedicated pin has a capacitor which blocks direct current (DC) flow and allows independent DC biasing of a radio frequency amplifier for increased signal amplification gain. Another package pin used for common power or ground connections supplies the second connection to the resonant tuned circuit. Multiple transponder inputs may be implemented in a single integrated circuit package using only one dedicated pin per input plus one common pin which may be used for another purpose, such as a power or a ground connection.

**21 Claims, 6 Drawing Sheets**

