



BANDSWITCHABLE DOUBLE TUNED RF CIRCUIT WITH BALANCED SECONDARY

ABSTRACT

A band switchable double tuned circuit (16) having a balanced secondary is presented. A primary tunable tank circuit with a plurality of first inductances (28, 30) is tuned to a first frequency by a first capacitor (36, 36) coupled in parallel with the first inductances (28, 30). A secondary tank circuit with a plurality of second inductances (32, 34, 62) inductively coupled to ones of the first inductances (28, 30) has a second capacitor (38, 38) coupled in parallel with the second inductances (32, 34, 62) for tuning the secondary to the first frequency. The DC reference potential (50) for the secondary circuit is coupled to a nodal junction of the plurality of second inductances (32, 34, 62) with the secondary tank circuit providing a balanced signal output. At least one of the plurality of first inductances (28, 30) and the second inductances (32, 34, 62) are switchable for bandswitching the tuning of the primary and secondary tank circuits to a second frequency. The output signal from the balanced secondary is coupled to the input of a balanced mixer (22) via constant bandwidth inductances (44a, 46a; 44b, 46b) without a mixer input balance transformer.

Fig 3