Dual-mode capacitors

Is there a dual mode step-down SC DC-DC converter?
As is discussed above,this paper proposes a dual mode step-down SC DC-DC converterwith four conversion ratios. PFM is adopted at heavy load while burst mode is adopted at light load. PFM achieves small output voltage ripple and high precision,a detailed system stability analysis is introduced.

What are the advantages of dual mode control in a DC-DC converter?
In the burst mode,the VCO turns off and turns on intermittently to get a stable output voltage V OUT. The advantages of dual mode control strategy are achieved in the SC DC-DC converter. The converter gets smaller ripple,higher efficiency and faster load transientover the entire load current range.

What is the simulated Q and inductance of a capacitor-loaded VID?
The simulated Q and inductance of a capacitor-loaded (CL)and open-loaded (OL) transformer- based VID is shown in Fig. 3 where it can be seen that the Q of a CL-VID is directly related to the Q of the capacitor.

Is a 40ff capacitor a good choice for a high-Q Vid?
As an example,a 40fF capacitor with a Q equal to 50 results in Q of 25 for the VID at 65 GHz,while that drops to around 15 for the capacitor with Q of 10. As discussed earlier,varactors suffer from low-Q in mm-wave frequencies,and it is not a good choicefor construction of high-Q VIDs.

What is dual mode control in SC DC-DC converter?
Dual mode control is adopted in the SC DC-DC converter,the SC DC-DC converter works in PFMfor heavy load condition while in burst mode for light load condition. In PFM,the EA (error amplifier) compares the V OUT with the reference voltage V REF.

How can dual mode control improve performance over a wide load range?
This design proposes a novel dual mode control strategy to achieve high performance over a wide load range. PFM is adopted at heavy load to achieve the small output voltage ripple while burst mode is adopted at light load to improve transient response and power efficiency.

It contains only a single current-controlled conveyor transconductance amplifier (CCCTA) and two grounded capacitors. The proposed oscillator has the advantage features of resistorless structure realization, electronic frequency control, availability of

This letter presents a quad-band microstrip bandstop filter based on open loop resonators having thin film chip capacitors. For this purpose, dual-mode properties of open loop resonators are used and four independently controllable resonance frequencies are obtained by two open loop resonators in different electrical length. Even/odd mode analysis of the ...

Dual-mode capacitors

This paper presents a novel single-source common-ground switched ...

IEEE MICROWAVE AND WIRELESS COMPONENTS LETTERS, VOL. 26, NO. 11, NOVEMBER 2016 873 Quad-Band Microstrip Bandstop Filter Design Using Dual-Mode Open Loop Resonators Having Thin Film Capacitors Ceyhun Karpuz, Ali Kursad Gorur, and Murat Emur Abstract-- This letter presents a quad-band microstrip bandstop filter based on open loop resonators having ...

3 ???· By effectively incorporating a modified active switched-inductor network with a new configured switched capacitor network, the proposed design achieves an exceptionally high voltage gain while significantly reducing the voltage stress across the components. A notable feature of the proposed dual-duty-triple-mode (DDTM) converter is its ...

Feed Structure Dual-Band Dual Mode Band Pass Filter with Lumped Capacitors The second way to improve the second band"s performance is by loading the open-loop stub with two lumped capacitors as ...

Considering this, the article at hand proposes a novel dual-mode switched-capacitor five-level (DMSC5L)-TL inverter with a CG feature connected to the grid. The proposed topology is comprised of a single dc source and power diode, three capacitors, four unidirectional, and three bidirectional power switches. Based on the series ...

Corpus ID: 115581983; Dual-Mode Sinusoidal Quadrature Oscillator with Single CCCTA and Grounded Capacitors @article{Tangsrirat2016DualModeSQ, title={Dual-Mode Sinusoidal Quadrature Oscillator with Single CCCTA and Grounded Capacitors}, author={Worapong Tangsrirat}, journal={Informacije Midem-journal of Microelectronics Electronic Components ...

This paper proposes a step-down switched-capacitor (SC) DC-DC converter ...

This paper proposes a step-down switched-capacitor (SC) DC-DC converter with pulse frequency modulation (PFM) and burst mode. This design proposes a novel dual mode control strategy to achieve high performance over a wide load range. PFM is adopted at heavy load to achieve the small output voltage ripple while burst mode is adopted ...

Two dual-band second-order highly selective band pass filters operated at 3.5/5.5 GHz and 3.5/6 GHz for wireless local area network /worldwide interoperability for microwave access WLAN/WiMAX applications are introduced in this paper. The designed filters are inspired of utilizing two coupled open-loop resonators loaded with stub, spiral resonators ...

This paper presents a novel single-source common-ground switched-capacitor (CGSC) type dual-mode five-level (5L) transformer-less (TL) multilevel inverter (MLI) topology with inherent boosting capability. The proposed topology comprises a single DC source, nine power switches, and two capacitors with self-voltage balancing ability ...

high Q VID structure. It can oscillate in two different modes (i.e. different bands) with sufficient ...

proposes a novel dual-mode switched-capacitor five-level (DMSC5L)-TL inverter with a CG feature connected to the grid. The proposed topology is comprised of a single dc source and power diode, three capacitors, four unidirectional and three bi-directional power switches. Based on the series-parallel switching conversion of the

On combining lumped capacitors with dual-mode resonators (DMRs) a miniaturised bandpass filter is reported in . A wide-band bandpass filter with miniaturised size, good selectivity and wide stopband is presented in this Letter which is better in all aspects in comparison to the reported works. This Letter starts with the analysis of DMRs and then ...

A novel dual-mode switched-capacitor five-level (DMSC5L)-TL inverter with a CG feature connected to the grid that can generate five distinctive output voltage levels during both the boost and buck operation modes with a self-voltage balancing operation for the involved capacitors. Transformerless (TL) grid-connected photovoltaic (PV) inverters with a common ...

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