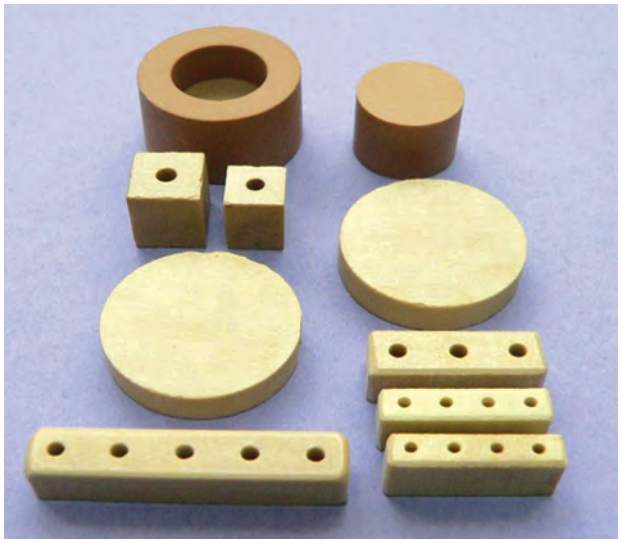
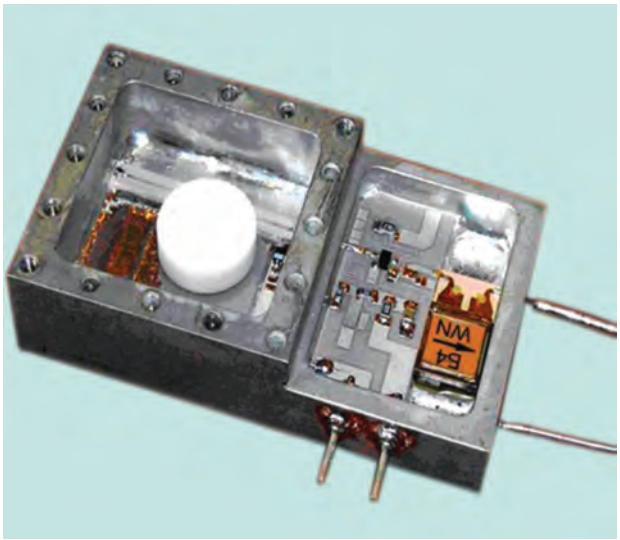
UHF DIELECTRIC RESONATORS FOR ADVANCED COMMUNICATION SYSTEMS



Dielectric resonators



Low-noise UHF oscillator

Areas of Application

The dielectric resonators are to be used in radio filters, diplexers, solid MW generators of advanced communication systems of centimeter and millimeter frequency ranges

Specification

Dielectric permittivity	$\varepsilon_1 = 20-25$, $\varepsilon_2 = 30-35$
Q-factor	$Q \times f = 100\,000$ (ε_1), $Q \times f = 80\,000$ (ε_2)
Resonant frequency coefficients (cam be given with an accuracy of 1 ppm/K)	$\tau_f = -5...+5$ ppm/K

Advantages

The dielectric resonators do not contain any expensive components (tantalum or rare-earth metals), which significantly reduces their price. They have a high quality factor and enable changing the resonant frequency coefficient as may be required, which ensures a sustainable operation of communication systems in a wide temperature range

Stage of Development. Suggestions for Commercialization

IRL7, TRL7
Manufactured, tested, and delivered, upon request

IPR Protection

IPR1, IPR3

Contact Information

Anatolii G. Belous, Vernadsky Institute of General and Inorganic Chemistry of the NAS of Ukraine; +38 044 424 22 11, e-mail: belous@ionc.kiev.ua