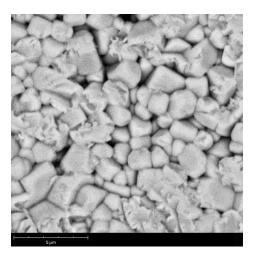


Data Sheet

Pz12 (Lead-Free) NBT-BT Piezoceramic Material

Description

Pz12 is a lead-free piezoceramic formulation based on the sodium bismuth titanate-barium titanate system (NBT-BT). It has been developed as a lead-free alternative to traditional hard-doped PZT ceramics and is available for customers who are looking to replace the lead-containing piezoceramics in their applications.



Key Features and Benefits

- Lead-Free Product
- Candidate for Replacing Hard-Doped PZT
- Underwater Transmitters

Ideal Applications

- Therapeutic Medical Ultrasound
- Ultrasonic Cleaning, Cutting and Welding

Property	Symbol	Unit	Value
Relative Free Dielectric Constant (1 kHz)	K_{33}^{\sigma}	-	660
Dielectric Dissipation Factor (1 kHz)	tanδ	-	0.027
Depoling Temperature	T _d	°C	200
Recommended Operating Range	Τ<	°C	120
Density	ρ	g/cm³	5.74
Mechanical Quality Factors	$Q_{_{\rm mp}}$	-	185
	$Q_{\rm mt}$	-	170
Coupling Coefficients	k _p	-	0.15
	k,	-	0.39
Piezoelectric Charge Coefficient (Displacement Coefficient)	d ₃₃	pC/N	107
Frequency Constants	N _p	Hz·m	3060
	N _t	Hz·m	2460
Acoustic Impedance	Z _a	MRayl	30

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