

CeramTec Sonox® P4 Piezoceramic

Category : Ceramic , Oxide , Piezoelectric

Material Notes:

Piezoceramic devices are used to convert mechanical features such as pressure or acceleration into voltages, or conversely, to convert a voltage into mechanical motion or oscillation. Piezoceramics require very little energy and their shape potential is almost unlimited. Such properties allow this material to be used in wide-ranging apparatus and mechanical engineering applications. Sonox® P4 is designed to withstand high electrical control voltages and intense mechanical (pressure) loads. It features low dielectric loss, dielectric constants between 1000 and 1600, and high Q values (between 500 and 2000). It is well suited for high-performance ultrasonic applications in the 20 kHz to several MHz range. P4 is specifically used in ultrasonic cleaning and sonar technology.

Order this product through the following link:

http://www.lookpolymers.com/polymer_CeramTec-Sonox-P4-Piezoceramic.php

Physical Properties	Metric	English	Comments
Density	7.65 g/cc	0.276 lb/in ³	

Electrical Properties	Metric	English	Comments
Curie Temperature	325 °C	617 °F	Tc
Dielectric Constant	660	660	e33 S/e?
	885	885	e11 S/e?
	1300	1300	e33 T/e?
	1535	1535	e11 T/e?
Dissipation Factor	0.0030	0.0030	tand
Piezoelectric Longitudinal Coupling Factor, k33	0.68	0.68	
Piezoelectric Transverse Voltage Coefficient, d31, 10 ⁻¹² m/V	-130	-130	
Piezoelectric Shear Charge Coefficient, d15, 10 ⁻¹² m/V	455	455	
Piezoelectric Longitudinal Voltage Coefficient, g33, 10 ⁻³ V-m/N	26.9	26.9	
Piezoelectric Planar Coupling Factor, kp	0.57	0.57	
Piezoelectric Mechanical Q	500	500	
Piezoelectric Shear Coupling Factor, k15	0.65	0.65	
Piezoelectric Longitudinal Charge Coefficient, d33, 10 ⁻¹² m/V	310	310	

Electrical Properties	Metric	English	Comments
Electrical Properties	Reverse Coupling		
Factor, k31			
Descriptive Properties			
		Value	Comments
Aging Rates (%/decade)		1.1	Cf
		-3.2	Ck
		-3.4	Ce
Elastic Compliance (10 ⁻¹² m ² /N)		14.9	s11 ^E
		18.1	s33 ^E
Elastic Rigidity (10 ¹⁰ N/m ²)		15.9	c33 ^D
		4.8	c55 ^D
Frequency Constants (kHz·mm)		1340	N3
		1480	N1
		2000	Nt
		2210	Np
Piezoelectric Coupling Coefficient, kt		0.5	
Piezoelectric Voltage Coefficient, e33 (C/m ²)		15.2	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215, Fengxian District, Shanghai City, China