

Material Specification · NCE81

Property	Symbol	Units	Hard Material
			NCE81
Dielectric Constant (1 kHz)	K^T_3		1020
Dielectric Loss Factor (1 kHz)	$\tan\delta_e$		0.0017
Dielectric Loss Factor (at 0.4V/mm)	$\tan\delta_e$		0.006
Density	ρ	kg/m ³	7730
Curie Point	T_c	°C	300
Mechanical Quality Factor	Q_m		1400
Coupling Coefficients	k_p		0.56
	k_{33}		0.69
	k_{31}		0.31
	k_t		0.47
Piezoelectric Charge	d_{31}	Coul/N x 10 ⁻¹² (or)	-100
Displacement Coefficient	d_{33}	m/V x 10 ⁻¹²	255
Piezoelectric Voltage Coefficient	g_{31}		-10.8
Voltage Coefficient	g_{33}	V·m/N x 10 ⁻³	28
Frequency Constants	N_p		2300
	N_t		2130
	N_{ta}	Hz·m	
	N_{33}		
	N_{31}		
Poisson's Ratio	γ		22
Elastic Constants Short Circuit	S^E_{11}		16
	S^E_{33}		17
	S^E_{12}	x 10 ⁻¹² m ² /N	-4.3
	S^E_{13}		-5.4
	S^E_{55}		34.5
	S^E_{66}		30.8