Contributing to Society with Technology

Under development

FUJICERA

Hard type PZT【C-25】

■Characteristics

- Low dielectric loss(tanδ)
- Middle mechanical Q(Qm)
- Middle dielectric constants(ε_{33}^{T})

■Applications

- Ultrasonic cleaners
- Ultrasonic welders
- Ultrasonic cutters
- HIFU

■Contacts

Department : Overseas sales

Mail : sales_dept@fujicera.co.jp

URL : https://www.fujicera.co.jp/en/

■Material Properties

Material No.			C-25
Coupling coefficients	$\times 10^{-2}$	K_p	56
		K_{31}	29
		K_{33}	69
		K_t	49
		K_{15}	70
Frequency constants	m·Hz	N_p	2,250
		N_{31}	1,700
		N_{33}	1,560
		N_t	2,100
		N_{15}	960
Dielectric constants		$\varepsilon^{T}_{11}/\varepsilon_0$	1,540
		$\varepsilon^{T}_{33}/\varepsilon_0$	**1,080**
Dissipation factor	%	tanδ	**0.18**
Piezoelectric charge constants	$\times 10^{-12}$ m/V	d_{31}	-100
		d_{33}	260
		d_{15}	510
Piezoelectric voltage constants	$\times 10^{-3}$ V·m/N	g_{31}	-10.0
		g_{33}	26.9
		g_{15}	37.4
Youngs modulus	$\times 10^{10}$ N/m^2	Y^{E}_{11}	8.9
		Y^{E}_{33}	6.9
		Y^{E}_{55}	3.0
Poisson's ratio		σ	0.26
Mechanical Q		Qm	**1,100**
Curie point	℃	Tc	280
Density	$\times 10^{3}$ kg/m^3	ρ	7.8
Compare with			Navy Ⅲ PZT-8

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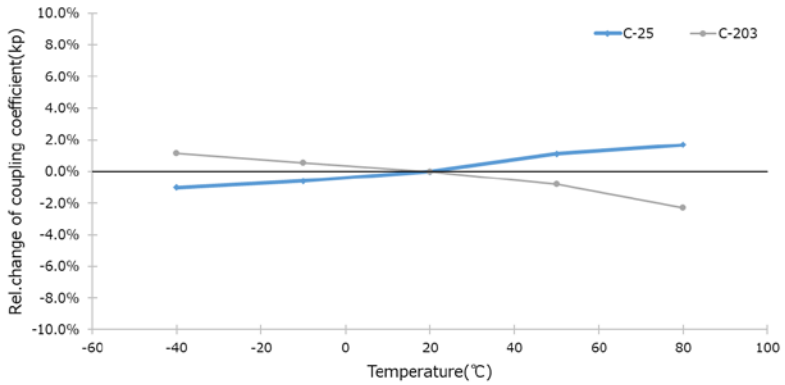
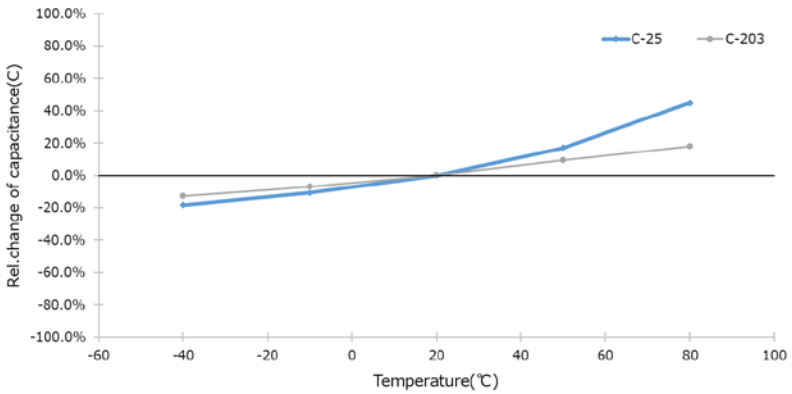
■Technical performance

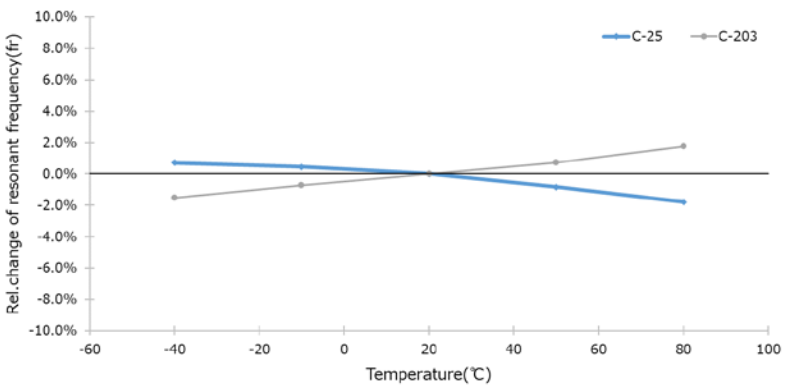
Relative temperature dependence of coupling coefficient(kp)



Relative temperature dependence of capacitance(C)



Relative temperature dependence of resonant frequency(fr)



Note : The property data and specifications described in this paper are reference values only and are not guaranteed values.
In addition, please note that specifications may be changed without notice for improvement.

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