

**No. 1C-c40 PbTiO<sub>3</sub>–PbZrO<sub>3</sub>–Pb(Zn<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub>–Pb(Sn<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub>**

1b	Density: Table 1C-c40-001. Ferroelectric transition temperature: Table 1C-c40-001.
5	Dielectric constant and coercive field: Table 1C-c40-001.
7a	Piezoelectricity: Table 1C-c40-001.
8a	Elastic compliance: Table 1C-c40-001.

**Table 1C-c40-001.** PbTiO<sub>3</sub>–PbZrO<sub>3</sub>–Pb(Zn<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub>–Pb(Sn<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub>. Electromechanical, piezoelectric and elastic constants of Pb((Zn<sub>1/3</sub>Nb<sub>2/3</sub>)<sub>0.09</sub>(Sn<sub>1/3</sub>Nb<sub>2/3</sub>)<sub>0.09</sub>Ti<sub>0.42</sub>Zr<sub>0.40</sub>)O<sub>3</sub> with 0.5 wt% MnO<sub>2</sub> (ceramics) [81Nis].

$\rho$ [kg·m <sup>-3</sup> ]	8·10 <sup>3</sup>	$d_{31}$ [ $\cdot 10^{-12}$ CN <sup>-1</sup> ]	-122
Average grain size [ $\mu$ m]	1.1	$d_{33}$ [ $\cdot 10^{-12}$ CN <sup>-1</sup> ]	281
$\Theta_f$ [°C]	323	$g_{31}$ [ $\cdot 10^{-3}$ m <sup>2</sup> C <sup>-1</sup> ]	-10
$E_c$ [ $\cdot 10^5$ Vm <sup>-1</sup> ]	20	$g_{33}$ [ $\cdot 10^{-3}$ m <sup>2</sup> C <sup>-1</sup> ]	24
$\kappa_{33}^T$ (at $f = 1$ kHz)	1340	$s_{11}^E$ [ $\cdot 10^{-12}$ m <sup>2</sup> N <sup>-1</sup> ]	11.0
$k_p$	0.57	$s_{33}^E$ [ $\cdot 10^{-12}$ m <sup>2</sup> N <sup>-1</sup> ]	14.0
$k_{33}$	0.69	$Q_m$	1400
$k_{15}$	0.61		
$k_t$	0.48		

**Reference**

- 81Nis Nishida, M., Kawashima, S., Ueda, I., Ouchi, H.: Jpn. J. Appl. Phys. **20**, Suppl. 20-4 (1981) 175.