

FAQ's TO FERROPERM PIEZOCERAMICS

QUESTION

What is the maximum voltage I can apply to my piezoceramic part?

What is the maximum power I can apply?

ANSWER:

It is difficult to say anything certain about the maximum operation voltage or power input you can use in piezoceramics, since these depend on several external factors.

These factors are for example:

- Operation frequency
- Impedance matching
- Frequency fine-tuning
- Matching layers
- Backing material
- Mechanical stresses
- Mechanical load
- Operation time
- Heat dissipation
- Ambient temperature
- etc.

We however have some general guidelines based on experience from customers in several different application areas:

- Pz26
Max 10 W/cm² of radiating surface
Max 200 VAC/mm.
- Pz27
Max 2-3 W/cm² of radiating surface
Max 50-100 VAC/mm.

If the piezoceramics are used in static applications and only driven in the positive regime, it is often the break-down voltage in air that sets the practical limit. We recommend not to go above 1 kV/mm.

As you can see from the first comments, it is important to point out that these values are only general. In special cases, customers have reported much higher or lower possible values.