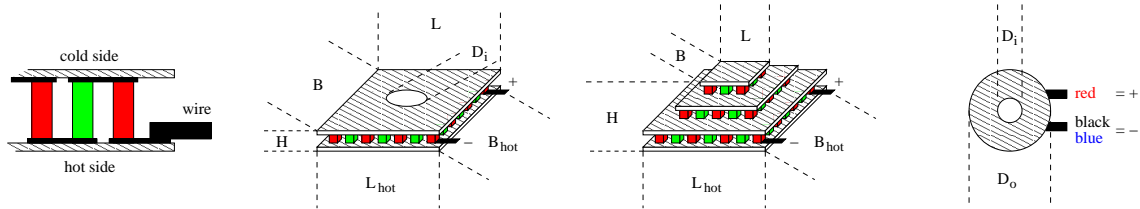


## industrial standard peltier element



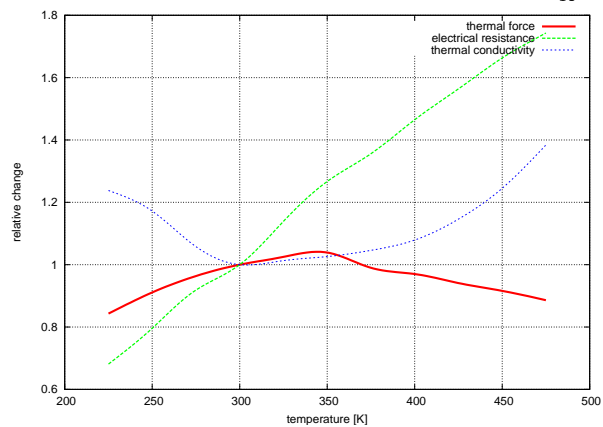
### thermal and electrical data:

thermal force:

resistance:

thermal conductivity:

$\alpha_{300K}$	0.0293	$\frac{V}{K}$
$\rho_{300K}$	2.19	$\Omega$
$\gamma_{300K}$	0.151	$\frac{W}{K}$



available maximum operating temperatures:  $T_{max}$  80, 120, 150(non-ROHS!), 225 °C  
 typical tolerances: ±5%

### mechanical data:

size of cold side:

size of hot side:

height tolerance:

length and width tolerances:

weight:

ceramic plates:

$L \times B \times H$	23.0 × 23.0 × 3.80 mm
$L_{hot} \times B_{hot}$	23.0 × 23.0 mm
$\Delta H$	±0.25 mm
$\Delta L$ and $\Delta B$	+0.5/ - 0.2 mm
$m$	10 g
ceramic plates:	BK-100 (grey), BK-96 (white) or AlN (opaque)

location of production:

Russia

### experimental data:

typical values at:

		$T_h = 50^\circ C:$	$T_h = 300 K:$
maximum cooling power:	$Q_{max}$	20.4 W	17.6 W
	at $\Delta T = 0$ and $I_{Q_{max}}$	4.3 A	4.0 A
maximum temperature difference:	$\Delta T_{max}$	77.8 K	69.0 K
	at $Q = 0$ and $I_{\Delta T_{max}}$	3.3 A	3.1 A
	$U_{max}$	9.5 V	8.8 V

### order information:

TEC1S-23-23-20/78-B: max. 80°C  
 TEC1S-23-23-20/78-C: max. 120°C  
 TEC1S-23-23-20/78-D: max. 150°C  
 TEC1S-23-23-20/78-G: max. 225°C

TEC1S-23-23-20/78-BS: sealed, max. 80°C  
 TEC1S-23-23-20/78-CS: sealed, max. 120°C  
 TEC1S-23-23-20/78-DS: sealed, max. 150°C  
 TEC1S-23-23-20/78-GS: sealed, max. 225°C