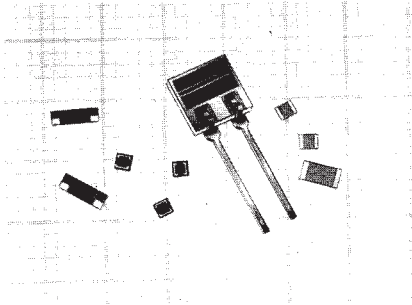



TFS $\begin{matrix} S \\ C \\ W \end{matrix}$

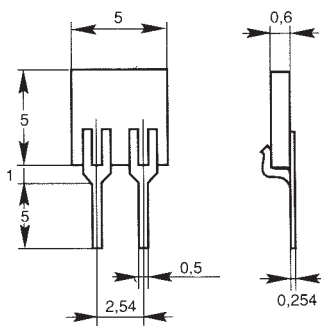
thin film temperature sensors



Vacuum deposited nickel films are used to produce temperature sensors with the following characteristics:

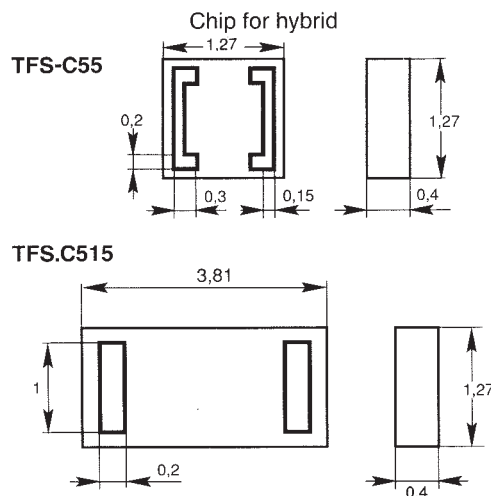
- CONFORM TO THE DIN 43760 SPECS.
TCR = 6180 ± 181 ppm/°C in the range 0, 100°C
- WIDE OHMIC VALUE RANGE: 25 Ω to 2500 Ω
- WIDE RANGE OF PACKAGING:
bare chips, W/A, SIL, etc.
- HIGH PRECISION AND STABILITY (down to 0,2 %)
- FULLY PASSIVATED WITH SILICON NITRIDE
- SMALL SIZE AND SHORT RESPONSE TIME

TFS.S
Single in line

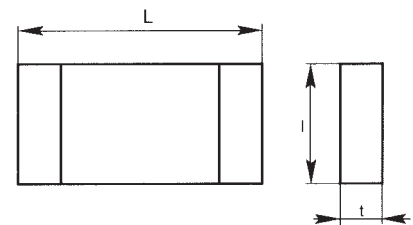


Dimensions in mm.

STANDARD FEATURES



TFS.W
Chip for SMD



Size	L	l	t
0705	1,9	1,25	0,5
1206	3,2	1,6	0,7

SPECIFICATIONS

MECHANICAL

SUBSTRATE... 99,6% alumina
 RESISTIVE ELEMENT... nickel, around 1,5 μ m thick
 PASSIVATION... silicon nitride (deposited after trimming to get perfect sealing)
 PACKAGING... bare chips for wire bonding, W/A for solder reflow or glue attachment
 single in line, specific packages

ELECTRICAL

Conformity with DIN 43760 specifications is guarantee in the range -60°C, +180°C

$$R_t/R_0 = 1 + 5,485 \cdot 10^{-3}T + 6,65 \cdot 10^{-6}T^2 + 2,805 \cdot 10^{-11}T^4 + \dots$$

Average T.C.R. :

6180 $\pm$ 181 ppm/°C in the range 0, +100°C

Ohmic value range:

TFS.S: 25 Ω , 50 Ω , 100 Ω , 500 Ω , 1000 Ω , 2500 Ω
 other values on request.

TFS.C55 from 25 Ω to 200 Ω

TFS.C515 from 25 Ω to 500 Ω

TFS.W from 25 Ω to 250 Ω

Absolute tolerance: $\pm 2\%$, $\pm 1\%$, $\pm 0,5\%$, $\pm 0,2\%$

Tolerance on temperature: to 0,33°C

Stability (1000 h at +150°C)

$$\frac{\Delta R}{R} < 0,2\%, \quad \frac{\Delta TCR}{TCR} < 0,2\%$$

Self heating, dissipation constant (DC), time constant (TC) will depend on assembly.

Please consult SFERNICE for your specific application.



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