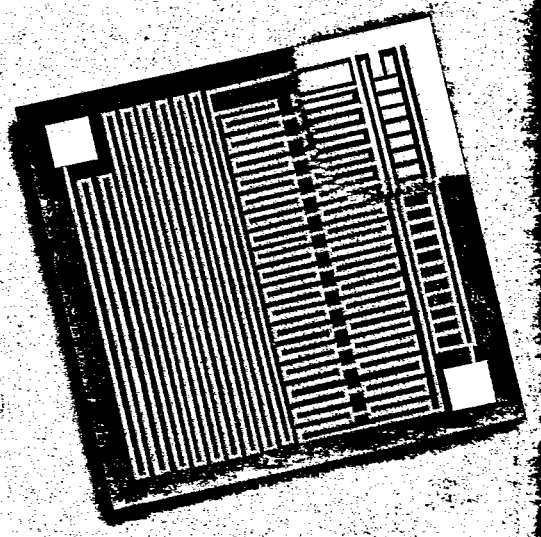
SFX SERIES THIN-FILM MEGOHM RESISTORS

FEATURES

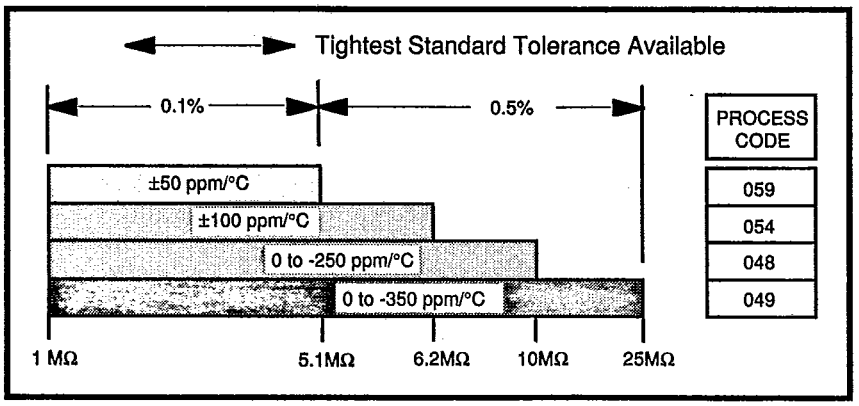
The SFX series megohm resistor chips extend the range of available resistors to 25MΩ. They offer better performance at high resistance values than is attainable with smaller chips.

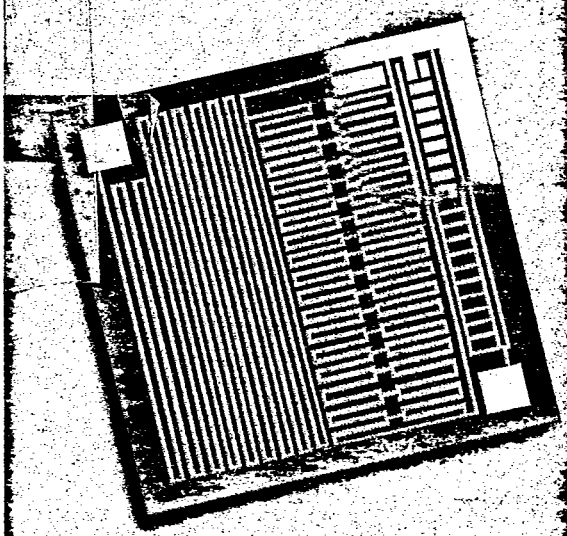
These chips are manufactured using state-of-the-art thin-film techniques, are 100% electrically tested and visually inspected to MIL-STD-883.

- Megohm resistor values, 1 MΩ to 25 MΩ
- Chip size 40 mil square
- Resistor material tantalum nitride, self-passivating
- Quick delivery
- Reduced hybrid size



TCR VALUES AND TOLERANCES





ELECTRICAL CHARACTERISTICS

Noise, MIL-STD-202, Method 308	-12 dB max.
Moisture resistance, MIL-STD-202, Method 106	±0.5% max. ΔR/R
Stability, 1000 hr., +125 °C, 10 mw	±1.0% max. ΔR/R
Operating temperature range	-55 °C to +125 °C
Thermal shock, MIL-STD-202, Method 107, Test Condition F	±0.25% max. ΔR/R
High temperature exposure, +150 °C, 100 hr.	±0.5% max. ΔR/R
Dielectric voltage breakdown	400 V
Insulation resistance	10^{12}Ω min.
Operating voltage	100 V max.
DC power rating at +70 °C (derated to zero at +175 °C)	20 mw
5 x rated power short-time overload	±0.25% max. ΔR/R

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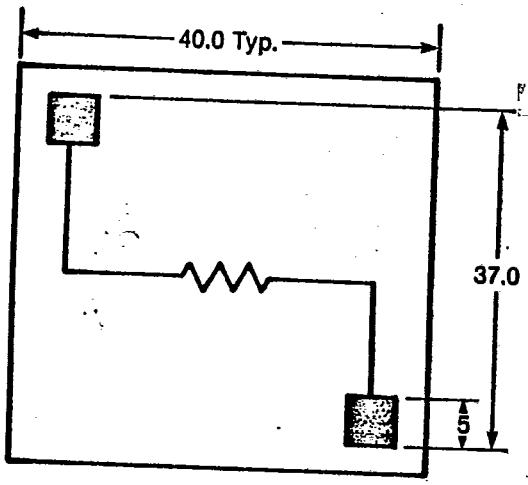
MECHANICAL DATA

Chip size	40 x 40 ±3 mil (1.0 x 1.0 ±0.075 mm)
Chip thickness	8 ±3 mil (0.203 ±0.075 mm)
Chip substrate material	Oxidized silicon, 10 kÅ min. SiO_2
Resistor material	Tantalum nitride, self-passivating
Bonding pads	5 x 5 mil (0.127 x 01.27 mm)
No. of pads	2
Pad material	10 kÅ min. aluminum
Backing	None, lapped semiconductor silicon

OPTIONS: Gold back for eutectic die attach
Resistance values above 25 MΩ are available.
30 × 30 mil and 55 × 55 mil sizes with different value and TCR restrictions.



APPLICATIONS

The SFX series megohm resistor chips are designed for use in hybrid packages which require small-size high-value resistors.

PART NUMBER DESIGNATION

Example: 100% visualled,5MΩ ±1%, ±100 ppm TCR

P/N: W SFX - 054 - 5000 3 F

- W — Inspection/Packaging
  - W for 100% visually inspected parts, per MIL-STD-883
  - X for sample, visually inspected loaded in matrix trays (4% AQL)
  - Y for sample, visually inspected die loaded in vials (4% AQL)
- SFX — Product Family
- 054 — Process Code - see MATRIX table
- 5000 — Value - Use First Four significant digits of the Resistance
- 3 — Multiplier Code:

D	0.0001
C	0.001
B	0.01
A	0.1
0	1
1	10
2	100
3	1000
4	10000

- F — Tolerance Code:

B	0.1%	J	5.0%
C	0.2%	K	10%
D	0.5%	M	20%
F	1.0%	L	25%
G	2.0%	N	50%
H	2.5%		