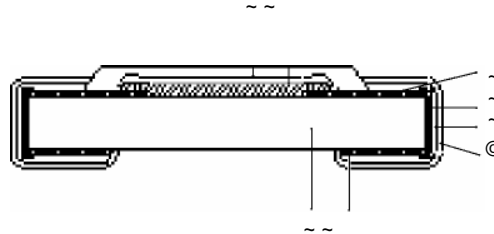


Thin Film Array Chip Resistor-TFAN Series

Construction



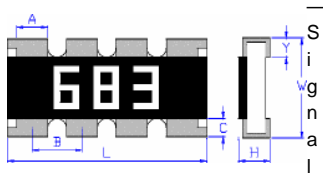
Ⓞ Alumina Substrate	Ⓞ Edge Electrode (Ag)	Ⓞ Resistor Layer (NiCr)
~ Bottom Electrode (Ag)	Ⓞ Barrier Layer (Ni)	Ⓞ Overcoat (Epoxy)
~ Top Electrode (Ag-Pd)	~ External Electrode (Sn)	

Features

- Advanced thin film technology —
- Very tight tolerance down to $\pm 0.1\%$
- Extremely low TCR down to $\pm 25\text{PPM}/\text{C}$ —
- RoHS compliant component,
compatible with lead (Pb)-free

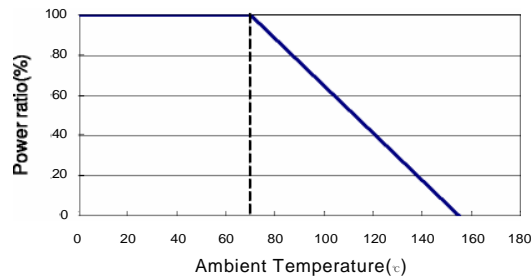
Applications

- Voltage divider
- Feedback circuits



conditioning

Derating Curve



Dimensions

Type	Number of Resistors	L	W	H	A	B	C	Y
TFAN43	4	3.2 \pm 0.15	1.6 \pm 0.15	0.55 \pm 0.10	0.5 \pm 0.15	0.8 \pm 0.05	0.3 \pm 0.15	0.3 \pm 0.15

Electrical Specifications

Type	Item	Power Rating at 70°C	Operating Temp. Range	Max. Operating Voltage	Max. Overload Voltage	Resistance Range				TCR (PPM/°C)
						$\pm 0.1\%$	$\pm 0.25\%$	$\pm 0.5\%$	$\pm 1\%$	
TFAN43		1/16	-55 ~ +155°C	50V	100V	100 - 20K				± 25 ± 50

Operating Voltage= $\sqrt{P \cdot R}$ or Max. operating voltage listed above, whichever is lower.

Overload Voltage= $2.5 \cdot \sqrt{P \cdot R}$ or Max. overload voltage listed above, whichever is lower.

Environmental Characteristics

Item	Requirement		Test Method
	Tol. ≤ 0.25%	Tol. > 0.25%	
Temperature Coefficient of Resistance (T.C.R.)	As Spec.		+25/-55/+25/+ 125/+25 C
Short Time Overload	R±0.25%	R±0.5%	RCWV*2.5 or Max. overload voltage for 5 seconds
Insulation Resistance	>1000 MC)		Apply 100V _{bc} for 1 minute
Endurance	R±0.25%	R±0.5%	70.2 C, Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Damp Heat with Load	R±0.25%	R±0.5%	40.2 C, 90-95% R.H. Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Bending Strength	R±0.25%	R±0.5%	Bending amplitude 3 mm for 10 seconds
Solderability	95% min. coverage		245.5 C for 3 seconds
Resistance to Soldering Heat	R±0.25%	R±0.5%	260±5 C for 10 seconds
Dielectric Withstand Voltage	100V		Max. overload voltage for 1 minute
Thermal Shock	R±0.25%	R±0.5%	-55 C ~150 C, 100 cycles
Low Temperature Operation	R±0.25%	R±0.5%	1 hour, -65 C, followed by 45 minutes of RCWV

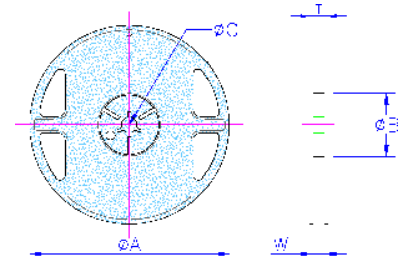
- Reference Standards: MIL-STD-202F; JIS-C 5201 -1
- Storage Temperature: 25±3C; Humidity < 80%RH

Packaging

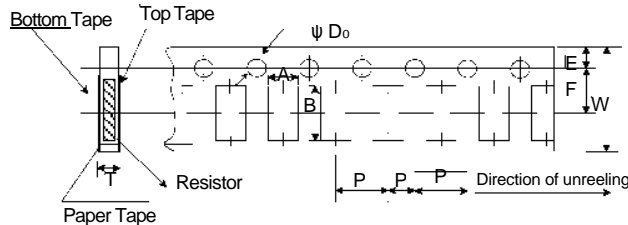
Reel Specifications & Packaging Quantity

Unit: mm

Type	Packaging Quantity	Tape Width	Reel Diameter	0A	0B	0C	W	T
TFAN43	Paper 5K	8mm	7 inch	178.5±1.5	10.0±0.2	13.0±0.2	9.0±0.5	12.5±0.5



Paper Tape Specifications



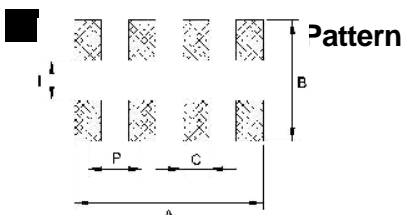
Unit: mm

Type	A	B	W	E	F	P ₀	P ₁	P ₂	OD ₀	T
TFAN43	1.95±0.1	3.50±0.1	8.0±0.2	1.75±0.1	3.5±0.05	4.0±0.1	4.0±0.05	2.0±0.05	1.5±0.1	0.85±0.1

Marking

TFAN43: 4 digits marking for example

Resistance	100C)	2.2KC)	10KC)	49.9KC)	100KC)
marking	1000	2201	1002	4992	1003



Unit: mm

Type	A	B	C	C1	I	I1	P	P1
TFAN43	2.85	3.10	0.45	--	0.80	--	0.80	--