

# Thin Film Chip Resistors

## Features

Suitable for both gold-tin soldering and epoxy die attachment.

Single and multiple value chips; Square and rectangular configurations.

Inventory of standard designs for quick delivery.

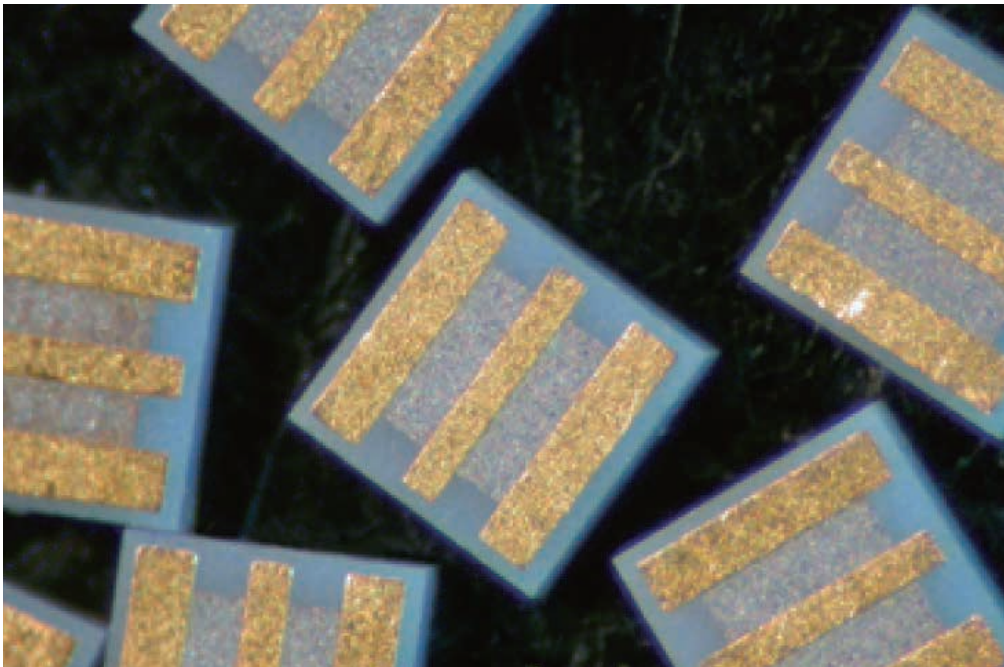
## Uses

Noise filtering and termination.

Matching for various purposes.

## Specifications

Characteristic Parameters	Specifications
Available Chip Size: L x W x t	Square: 0.4 x 0.4 x 0.25mm to 0.8 x 0.8 x 0.25mm (16 x 16 x 10mils to 31 x 31 x 10mils) Rectangle: 0.5 x 1.0 x 0.25mm (20 x 40 x 10mils)
Alumina Purity	≥99.4%
Relative Permittivity	ε <sub>r</sub> =9.8 @10GHz ε <sub>r</sub> =10.3 @1MHz
Design Type	Type A (no border on bottom face)
Metallization	Top: TaN / TiW / Au Bottom: TiW / Pt / Au
Nominal Resistance Values	SA Series: 10Ω to 1KΩ MB Series: 10Ω x 2 to 50Ω x 2
Resistance Tolerances	J = ±5% K = ±10% M = ±20%
Temperature Characteristic of Resistance (TCR)	-100 ± 50ppm /°C (@ -55°C to +70°C)
Resistor Rated Power	100mW @ < 70°C
Heat Resistance	320°C x 5min Max N <sub>2</sub> atmosphere






## Key to Part Numbers

(1) (2) (3) (4) (5) (6) (7) (8) (9)  
**P/N: S A W 101 K 2A 2 1 H**

(1) Resistance Type S: Single Value M: Multi Value	(4) Nominal Resistance code 1R0: 1Ω 100: 10Ω 101: 100Ω 102: 1000Ω	(6) Rated Power Code 2A: 100mA	(9) Size F: 0.40 x 0.40mm (16 x 16mils) H: 0.50 x 0.50mm (20 x 20mils) P: 0.80 x 0.80mm (31 x 31mils) HR: 0.50 x 1.00mm (20 x 40mils)
(2) Resistors per Chip A: 1 B: 2	(5) Resistance Tolerance code J: ±5% K: ±10% M: ±20%	(7) Chip Thickness Code 2: 0.25mm (10mils)	(8) Chip Backside Finish Code 0: No Metallization 1: TiW/Pt/Au 2: TiW/Pt
(3) Top face Metallization W: TaN/TiW/Au			

## Product List

Design	Part No.	Resistance Value	Outer dimensions (LxWxt)	Sheet resistance (Ω/□)
		Ω (Tolerance ±10%)	mm mils	
SA Series 	SAW100K2A21H	10	0.50±0.05x0.50±0.05x0.25±0.05 20±2x20±2x10±2	50
	SAW250K2A21F	25	0.40±0.025x0.40±0.025x0.25±0.05 16±1x16±1x10±2	50
	SAW250K2A21H	25	0.50±0.05x0.50±0.05x0.25±0.05 20±2x20±2x10±2	50
	SAW500K2A21F	50	0.40±0.025x0.40±0.025x0.25±0.05 16±1x16±1x10±2	100
	SAW500K2A21H	50	0.50±0.05x0.50±0.05x0.25±0.05 20±2x20±2x10±2	75
	SAW500K2A21HR	50	0.50±0.05x1.00±0.05x0.25±0.05 20±2x40±2x10±2	50
	SAW500K2A21P	50	0.80±0.05x0.80±0.05x0.25±0.05 31±2x31±2x10±2	75
	SAW750K2A21HR	75	0.50±0.05x1.00±0.05x0.25±0.05 20±2x40±2x10±2	75
	SAW101K2A21H	100	0.50±0.05x0.50±0.05x0.25±0.05 20±2x20±2x10±2	100
	SAW101K2A21HR	100	0.50±0.05x1.00±0.05x0.25±0.05 20±2x40±2x10±2	50

Design	Part No.	Resistance Value	Outer dimensions (LxWxt)	Sheet resistance (Ω/□)
		Ω (Tolerance ±10%)	mm mils	
SA Series 	SAW201K2A21H	200	0.50±0.05x0.50±0.05x0.25±0.05 20±2x20±2x10±2	50
	SAW102M2A21H	1000(±20%)	0.50±0.05x0.50±0.05x0.25±0.05 20±2x20±2x10±2	100
MB Series 	MBW200K2A21P	10.0x2	0.80±0.05x0.80±0.05x0.25±0.05 31±2x31±2x10±2	50
	MBW250K2A21P	12.5x2	0.80±0.05x0.80±0.05x0.25±0.05 31±2x31±2x10±2	50
	MBW500K2A21P	25.0x2	0.80±0.05x0.80±0.05x0.25±0.05 31±2x31±2x10±2	50
	MBW750K2A21P	37.5x2	0.80±0.05x0.80±0.05x0.25±0.05 31±2x31±2x10±2	75
	MBW101K2A21P	50.0x2	0.80±0.05x0.80±0.05x0.25±0.05 31±2x31±2x10±2	100

This specification may be modified without notice. (2015.DEC) C-100-7