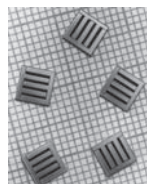


# Current Sensing Wirebondable Thin Film Chip Resistors



## DESIGN SUPPORT TOOLS

[click logo to get started](#)


This thin film chip resistor fits applications as force balance scales, E beam deflection systems, switching power supplies, etc... all rely on current sensors to feed back and control the current.

Gold pads are compatible with thermosonic or ultrasonic bonding of gold and aluminum wires.

## FEATURES

- Low ohmic value down to 0.05  $\Omega$
- Tolerance down to 1 %
- Stability 0.1 % < 2000 h at Pn at +70 °C
- Low noise < -35 dB
- Low TCR 100 ppm/°C
- Wirebondable
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

## STANDARD ELECTRICAL SPECIFICATIONS

MODEL	SIZE	RESISTANCE RANGE $\Omega$	RATED POWER $P_{70\text{ }^{\circ}\text{C}}$ W	TOLERANCE $\pm$ %	TEMPERATURE COEFFICIENT $\pm$ ppm/°C
SA	0606	0.05 to 1	0.5	1, 2, 5	100
SB	1212	0.05 to 1	2	1, 2, 5	100
SC	2020	0.05 to 1	6	1, 2, 5	100

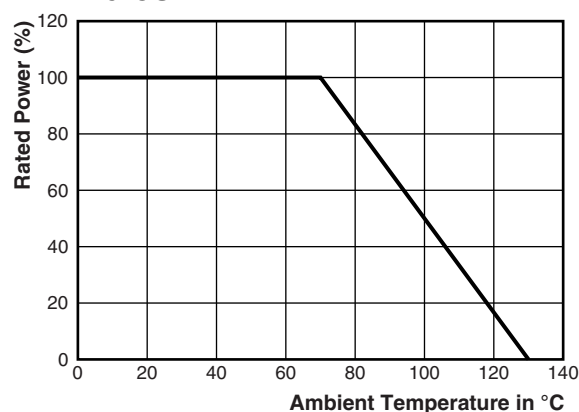
## CLIMATIC SPECIFICATIONS

Operating temperature range	-55 °C to +125 °C
Storage temperature range	-55 °C to +155 °C

## MECHANICAL SPECIFICATIONS

Substrate	Alumina
Resistive element	NiCr
Glassivation	Ta <sub>2</sub> O <sub>5</sub>
Bonding pads	Gold
Backside metallization	On request Ni Au

## DERATING CURVE



## TOLERANCE VS. OHMIC VALUE

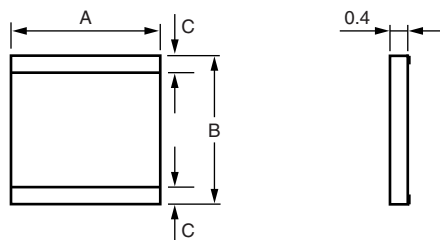
OHMIC VALUE RANGE $\Omega$	TOLERANCE $\pm$ %
$0.05 \leq R < 1$	5
$0.2 \leq R < 1$	2
$0.5 \leq R < 1$	1

### Note

- Higher values and higher tolerances on request



**DIMENSIONS** in millimeters



SERIES DISSIPATION	POWER	DIMENSIONS		
		A	B	C
SA	0.5 W	1.5	1.5	0.2
SB	2 W	3	3	0.4
SC	6 W	5	5	0.5

## GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: **SAKR588G0124**

<b>S</b>	<b>A</b>	<b>K</b>	<b>R</b>	<b>5</b>	<b>8</b>	<b>8</b>	<b>G</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>4</b>
GLOBAL MODEL		TCR		VALUE		TOLERANCE		OPTION			
SA SB SC		K = ± 100 ppm/°C		R = decimal		F = ± 1 % G = ± 2 % J = ± 5 %		Leave blank if no option			

Historical Part Number example: **S\*A 100 U588 G R0124 E4**

<b>S*A</b>	<b>100</b>	<b>U588</b>	<b>G</b>	<b>R0124</b>	<b>e4</b>
GLOBAL MODEL	TCR	VALUE	TOLERANCE	OPTION	RoHS
SA SB SC	K = ± 100 ppm/°C	R or U = decimal	F = ± 1 % G = ± 2 % J = ± 5 %	Leave blank if no option	



## Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Vishay:

[SB110-E3/54](#) [SB20H150CT-1E3/45](#) [SB15H45-E3/54](#) [SB250-E3/73](#) [SB250-E3/54](#)