

# High Ohmic Value (up to 1.5 G $\Omega$ ), High Power Resistors (up to 10 W at 25 °C) Thick Film



## FEATURES

- RoHS for most values, please consult us
- High ohmic values up to 1.5 G $\Omega$
- Power rating up to 10 W at + 25 °C
- Molded or coated
- Ceramic core
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

## DIMENSIONS in millimeters

|  | SERIES AND STYLE | A         | Ø B       | Ø E ± 0.1 | WEIGHT g | FINISH |
|--|------------------|-----------|-----------|-----------|----------|--------|
|  | HPS58            | 6.5 ± 0.2 | 2.4 ± 0.1 | 0.6       | 0.24     | molded |
|  | HPS63            | 10 ± 0.2  | 3.7 ± 0.1 | 0.8       | 0.29     |        |
|  | HPS68            | 15 ± 0.2  | 5.6 ± 0.3 |           | 0.67     |        |
|  | HPS523           | 23 ± 2.3  | 5 ± 0.3   | 0.8       | 1.23     | coated |
|  | HPS923           | 23 ± 2.5  | 9 ± 0.5   |           | 4.60     |        |
|  | HPS932           | 32 ± 2.5  | 9 ± 0.5   |           | 5.27     |        |
|  | HPS947           | 47 ± 2.5  | 9 ± 0.5   |           | 7.18     |        |

## STANDARD ELECTRICAL SPECIFICATIONS

| MODEL  | RESISTANCE RANGE $\Omega$ | RATED POWER $P_{25^\circ\text{C}}$ W | LIMITING ELEMENT VOLTAGE V | TOLERANCE $\pm \%$ | TEMPERATURE COEFFICIENT $\pm \text{ppm}/^\circ\text{C}$ | CRITICAL RESISTANCE ( $\Omega$ ) | CLIMATIC CATEGORY                |
|--------|---------------------------|--------------------------------------|----------------------------|--------------------|---------------------------------------------------------|----------------------------------|----------------------------------|
| HPS58  | 200 to 100M               | 1                                    | 300                        | 0.5, 1, 2, 5, 10   | 150                                                     | 90K                              | - 55 °C/<br>+ 200 °C/<br>56 days |
| HPS63  | 200 to 175M               | 2                                    | 700                        | 0.5, 1, 2, 5, 10   | 150                                                     | 245K                             |                                  |
| HPS68  | 300 to 400M               | 3                                    | 1500                       | 0.5, 1, 2, 5, 10   | 150                                                     | 750K                             |                                  |
| HPS523 | 800 to 650M               | 4                                    | 2000                       | 0.5, 1, 2, 5, 10   | 150                                                     | 1M                               |                                  |
| HPS923 | 1K to 1G                  | 6                                    | 2500                       | 0.5, 1, 2, 5, 10   | 150                                                     | 1.041M                           |                                  |
| HPS932 | 1K to 1G                  | 8                                    | 5000                       | 0.5, 1, 2, 5, 10   | 150                                                     | 3.125M                           |                                  |
| HPS947 | 2K to 1.5G                | 10                                   | 8000                       | 0.5, 1, 2, 5, 10   | 150                                                     | 6.4M                             |                                  |

## MARKING

GEKA trade-mark, series, style, nominal resistance (in  $\Omega$ ), tolerance (in %), letter P for TCR  $\pm 150 \text{ ppm}/^\circ\text{C}$ , manufacturing date. Because of lack of space, small styles are marked with ohmic value (in  $\Omega$ ), tolerance (in %) and letter P.

## ORDERING INFORMATION

| HPS   | 68   | 50 M $\Omega$ | 10 %      | 150 ppm/ $^\circ\text{C}$ | BL20      | e1             |
|-------|------|---------------|-----------|---------------------------|-----------|----------------|
| MODEL | SIZE | OHMIC VALUE   | TOLERANCE | TEMPERATURE COEFFICIENT   | PACKAGING | LEAD (Pb)-FREE |



| GLOBAL PART NUMBER INFORMATION |                |   |                                                                                                                                                                                                                                                  |   |   |   |                                                        |   |                            |   |                                                                                                                                                                                                   |   |   |               |   |
|--------------------------------|----------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|--------------------------------------------------------|---|----------------------------|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---------------|---|
| H                              | P              | S | 0                                                                                                                                                                                                                                                | 0 | 6 | 8 | 5                                                      | 0 | 0                          | 5 | K                                                                                                                                                                                                 | P | B | 1             | 5 |
| GLOBAL MODEL                   | STYLE          |   | OHMIC VALUE                                                                                                                                                                                                                                      |   |   |   | TOLERANCE                                              |   | TEMPERATURE COEFFICIENT    |   | PACKAGING                                                                                                                                                                                         |   |   | SPECIAL       |   |
| HPS                            | HPS: 58 to 947 |   | The first three digits are significant figures and the last digit specifies the number of zeros to follow. R designates decimal point.<br>1006 = 100 M $\Omega$<br>5104 = 5.1 M $\Omega$<br>3303 = 330 k $\Omega$<br>5005 = 50 M $\Omega$<br>... |   |   |   | D = 0.5 %<br>F = 1 %<br>G = 2 %<br>J = 5 %<br>K = 10 % |   | P = 150 ppm<br>K = 100 ppm |   | B15 = Blister (20 pieces)<br>B19 = Blister (30 pieces)<br>A18 = Ammopack (400 pieces)<br>A20 = Ammopack (500 pieces)<br>B17 = Blister (25 pieces)<br>R10 = Reel (500 pieces)<br><br>As applicable |   |   | As applicable |   |



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