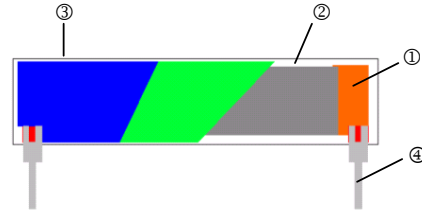


# Precision High Voltage Resistor – PHV Series

## Construction



① Inner Electrode (Ag)	③ Overcoat (Epoxy)
② Resistor Layer (Ni / Cr)	④ Terminal (Cu / Sn)

## Features

- Resistance range from 10K ohm to 60 Meg ohm
- Low TCR down to 25 PPM/°C
- Tight tolerance down to ±0.1%
- Load life stability of 0.10% per 1,000 hours
- High operating voltage

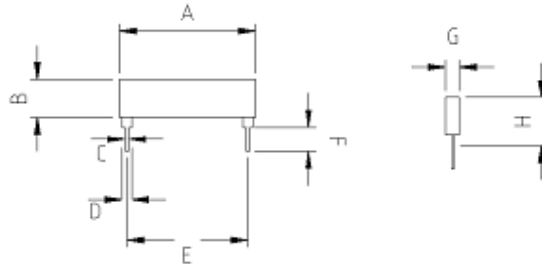
## Applications

- HV Power Supplies
- Medical Instrument
- Current Pulse Limiters
- Ionization Chambers

## Dimensions

Unit: mm

Type	A	B	C	D	E	F	G max.	H max.	Weight (g) (1000pcs)
PHV 2055	20±0.5	5.5±0.5	0.5	1.4	17.78±0.5	3.3±0.7	2.0	7.5	420
PHV 2555	25.4±0.5	5.5±0.5	0.5	1.4	22.86±0.5	3.3±0.7	2.0	7.5	468
PHV 3855	38.1±0.5	5.5±0.5	0.5	1.4	35.56±0.5	3.3±0.7	2.0	7.5	500



## Part Numbering

PHV	2055	B	B	C		1001	N
Product Type	Dimensions (L×W)	Resistance Tolerance	Packaging Code	TCR (PPM/°C)	Power Rating	Resistance	Marking
	2055: 20.0x5.5 2555: 25.4x5.5 3855: 38.1x5.5	B: ±0.1% C: ±0.25% D: ±0.5% E: ±0.2% F: ±1%	B: Bulk	C: ±25 D: ±50	: Standard T: 1W	1001: 1KΩ 1004: 1MΩ 4005: 40MΩ	: Standard Marking N: No Marking

## Electrical Characteristics Specifications

Item Type	Power Rating at 70 °C	Operating Temp. Range	Max. Operating Voltage	Max. Overload Voltage	Resistance Range					TCR (PPM/°C)
					±0.1%	±0.2%	±0.25%	±0.5%	±1%	
2055	1W	-40 ~ +85 °C	1200V	1500V	10KΩ - 1MΩ	10KΩ - 40MΩ				±25 ±50
2555	1W	-40 ~ +85 °C	1200V	1500V	10KΩ - 1.5MΩ	10KΩ - 50MΩ				
3855	1W	-40 ~ +85 °C	1200V	1500V	10KΩ - 2MΩ	10KΩ - 60MΩ				

Operating Voltage=√(P\*R) or Max. operating voltage listed above, whichever is lower.

Overload Voltage=2.5\*√(P\*R) or Max. overload voltage listed above, whichever is lower.

## ■ Environmental Characteristics

Item	Requirement	Test Method
Temperature Coefficient of Resistance (T.C.R.)	As Spec.	+25/-55/+25/+125/+25°C
Short Time Overload	$\Delta R \pm 0.5\%$	RCWV*2.5 or Max. overload voltage for 5 seconds
Insulation Resistance	>1000M $\Omega$	Apply 100V <sub>DC</sub> for 1 minute
Endurance	$\Delta R \pm 0.5\%$	70 $\pm$ 2°C, Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Damp Heat with Load	$\Delta R \pm 0.3\%$	40 $\pm$ 2°C, 90~95% R.H. Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Dry Heat	$\Delta R \pm 0.2\%$	at +155°C for 1000 hrs
Bending Strength	$\Delta R \pm 0.2\%$	Bending amplitude 3mm for 10 seconds
Solderability	90% min. coverage	245 $\pm$ 5°C for 3 seconds
Resistance to Soldering Heat	$\Delta R \pm 0.2\%$	260 $\pm$ 5°C for 10 seconds
Dielectric Withstand Voltage	By Type	Apply Max. overload voltage for 1 minute
Thermal Shock	$\Delta R \pm 0.25\%$	-55°C~150°C, 100 cycles
Low Temperature Operation	$\Delta R \pm 0.2\%$	1 hour, -65°C, followed by 45 minutes of RCWV

■ Reference Standards: MIL-STD-202, JIS-C 5201-1

■ Storage Temperature: 25 $\pm$ 3°C; Humidity < 80%RH