

Precision High Voltage Resistor - PHV Series



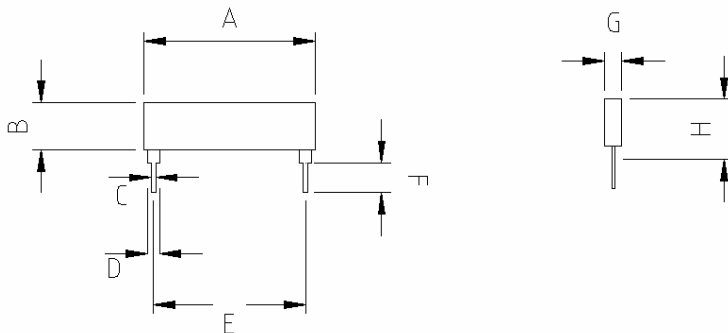
Features

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

Applications

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

Dimensions



Unit: mm

Type	A	B	C	D	E	F	G (Max)	H (Max)
2055	20 \pm 0.5	5.5 \pm 0.5	0.5	1.4	17.78 \pm 0.5	3.3 \pm 0.7	2.0	7.5
2555	25.4 \pm 0.5	5.5 \pm 0.5	0.5	1.4	22.86 \pm 0.5	3.3 \pm 0.7	2.0	7.5
3855	38.1 \pm 0.5	5.5 \pm 0.5	0.5	1.4	35.56 \pm 0.5	3.3 \pm 0.7	2.0	7.5

Part Numbering

PHV	2055	B	B	C		1000	N
①	②	③	④	⑤	⑥	⑦	⑧

① Product Type

Product Type	
PHV	Precision High Voltage Resistors

② Dimensions (L x W)

Codes	Dimensions (LxW)
2055	20.0 \times 5.5mm
2555	25.4 \times 5.5mm
3855	38.1 \times 5.5mm

③ Resistance Tolerance

Codes	Resistance Tolerance
B	$\pm 0.1\%$
E	$\pm 0.2\%$
C	$\pm 0.25\%$
D	$\pm 0.5\%$
F	$\pm 1\%$

④ Packaging

Code	Type
B	Bulk

⑤ TCR

Codes	Type
C	$\pm 25\text{PPM}/^\circ\text{C}$
D	$\pm 50\text{PPM}/^\circ\text{C}$

⑥ Power Rating

Codes	Type
	Standard

⑦ Resistance

Codes	Type
1001	1K Ω
1004	1M Ω
4005	40M Ω

⑧ Marking

Codes	Type
	Standard Marking
N	No Marking

Electrical Characteristics Specifications

Item Type	Power Rating at 70°C	Operating Temp. Range	Max Operating Voltage	Max Overloading Voltage	Resistance Tolerance	Resistance Range	TCR (PPM/°C)
2055	1W	-40 ~ +85°C	1200V	1500V	±0.10%	10KΩ~1MΩ	±25 ±50
					±0.20%	10KΩ~40MΩ	
					±0.25%		
					±0.50%		
					±1.0%		
2555	1W	-40 ~ +85°C	1200V	1500V	±0.10%	10KΩ~1.5MΩ	
					±0.20%	10KΩ~50MΩ	
					±0.25%		
					±0.50%		
					±1.0%		
3855	1W	-40 ~ +85°C	1200V	1500V	±0.10%	10KΩ~2MΩ	
					±0.20%	10KΩ~60MΩ	
					±0.25%		
					±0.50%		
					±1.0%		

Environmental Characteristics

Item	Specification	Test Method
Short Time Overload	$\Delta R \pm 0.5\%$	JIS-C-5202-5.5 RCWV*2.5 or Max Overloading Voltage · 5 seconds
Dielectric Withstand Voltage	By type	MIL-STD-202F Method 301 Apply Max Overload Voltage for 1 minute
Insulation Resistance	>1000MΩ	MIL-STD-202F Method 302 Apply 100V _{DC} for 1 minute
Thermal Shock	$\Delta R \pm 0.25\%$	MIL-STD-202F Method 107G -55°C~150°C, 100 cycles
Load Life	$\Delta R \pm 0.5\%$	MIL-STD-202F Method 108A RCWV · 70°C · 1.5 hours ON · 0.5 hours OFF, Total 1000~1048 hours
Humidity (Steady State)	$\Delta R \pm 0.3\%$	MIL-STD-202F Method 103B 40°C , 90~95%RH, RCWV 1.5 hours ON, 0.5 hours OFF, total 1000~1048 hours
Resistance to Dry Heat	$\Delta R \pm 0.2\%$	JIS-C-5202-7.2 96 hours @ +155°C without load
Low Temperature Operation	$\Delta R \pm 0.2\%$	JIS-C-5202-7.1 1 hours, -65°C, followed by 45 minutes of RCWV
Bending Strength	$\Delta R \pm 0.2\%$	JIS-C-5202-6.1.4 Bending Amplitude 3mm for 10 seconds
Solderability	90% min coverage	MIL-STD-202F Method 208H 245°C ±5°C, 3±0.5 (sec)
Resistance to Soldering Heat	$\Delta R \pm 0.2\%$	MIL-STD-202F Method 210E 260±5°C, 10±1 seconds

* Storage Temperature :25±3°C ; Humidity <80%RH