



## Sample Kit SMD Resistor Solutions for High Voltage Measurement Circuits



Files contain lengths of blister tape, each holding 20 resistors. Parts are sorted in the ascending order of its resistance value and appropriately marked.

### FEATURES

- High operating voltage (up to 3 kV)
- Low voltage coefficient of resistance, down to < 1 ppm/V
- High ohmic values, up to 100 MΩ
- Precision parts for voltage divider low side included
- AEC-Q200 qualified parts included
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



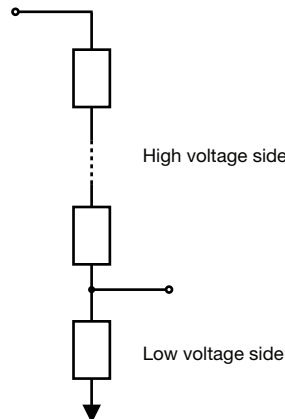
RoHS  
COMPLIANT

SPECIFICATIONS						
Laboratory kit	LAB HV 01					
Resistor type	TNPV e3	MM HV	RCV e3	RCV-AT e3	MC AT	TNPW e3
Imperial size	0805, 1206, 1210	0204, 0207	1206	2010, 2512	0603, 0805, 1206	0603
Maximum operating voltage, U <sub>max</sub> , AC <sub>RMS</sub> or DC	0805: 450 V 1206: 700 V 1210: 1000 V	0204: 500 V 0207: 1000 V	1206: 500 V	2010: 2000 V 2512: 3000 V	0603: 75 V 0805: 150 V 1206: 200 V	0603: 75 V
Temperature coefficient	± 25 ppm/K	± 50 ppm/K	± 100 ppm/K	± 100 ppm/K, ± 200 ppm/K	± 25 ppm/K	± 25 ppm/K
Voltage coefficient  c	< 1 ppm/V	< 2 ppm/V	25 ppm/V	25 ppm/V	-	-
Tolerance	± 0.1 %	± 1 %	± 1 %	± 1 %, ± 5 %	± 0.1 %	± 0.1 %
Resistance range / E-series	Refer to Resistance Tables					
Number of resistance values	120					
Resistors per value / total	20 / 2400					
Number of pages / files	12 / 1					
Qualification	AEC-Q200	-	-	AEC-Q200	AEC-Q200	AEC-Q200

### Note

- The products are specified by their underlying datasheets in their most current edition at  
 TNPV e3 High Voltage Thin Film Flat Chip Resistors [www.vishay.com/doc?28881](http://www.vishay.com/doc?28881)  
 MM HV Professional High Voltage Thin Film MELF Resistors [www.vishay.com/doc?28880](http://www.vishay.com/doc?28880)  
 RCV e3 High Voltage Thick Film Chip Resistors [www.vishay.com/doc?20054](http://www.vishay.com/doc?20054)  
 RCV-AT e3 High Voltage Thick Film Chip Resistors [www.vishay.com/doc?20082](http://www.vishay.com/doc?20082)  
 MC AT High Stability Thin Film Flat Chip Resistors [www.vishay.com/doc?28952](http://www.vishay.com/doc?28952)  
 TNPW e3 High Stability Thin Film Flat Chip Resistors [www.vishay.com/doc?28758](http://www.vishay.com/doc?28758)

### TYPICAL APPLICATION CIRCUIT





RESISTANCE TABLE HIGH VOLTAGE SIDE										
Resistor type	TNPV e3			MM HV		RCV e3	RCV-AT e3 <sup>(1)</sup>		MC AT	
Imperial size	0805	1206	1210	0204	0207	1206	2010	2512	0805	1206
Max. operating voltage, U <sub>max.</sub> AC <sub>RMS</sub> or DC (V)	450	700	1000	500	1000	500	2000	3000	150	200
Temperature coefficient (ppm/K)	± 25	± 25	± 25	± 50	± 50	± 100	± 100	± 100	± 25	± 25
Tolerance (%)	± 0.1	± 0.1	± 0.1	± 1	± 1	± 1	± 1	± 1	± 0.1	± 0.1
Resistance values (Ω)	220K	330K	330K	1M	1M	100K	100K	100K	1M	1M
	249K	470K	499K	1.8M	1.8M	220K	200K	200K	1.5M	1.5M
	330K	499K	680K	2M	2M	562K	499K	499K	2M	2M
	499K	750K	750K	2.4M	2.4M	1M	1M	1M	3.3M	3.3M
	560K	820K	820K	3M	3M	2M	2M	2M	4.7M	4.7M
	680K	1M	1M	4.7M	4.7M	3.3M	4.99M	4.99M	4.99M	4.99M
	750K	1.5M	1.5M	5.1M	5.1M	4.02M	10M	10M	5.1M	5.1M
	820K	1.6M	2M	6.49M	6.49M	4.3M	20M	20M	6.49M	6.49M
	910K	1.8M	2.49M	7.5M	7.5M	7.5M	47M	47M	6.98M	7.5M
	1M	2M	3.01M	10M	10M	10M	100M	100M	7.5M	10M

**Note**

<sup>(1)</sup> Resistance values above 10 MΩ only available with temperature coefficient of ± 200 ppm/K and tolerance of ± 5 %

RESISTANCE TABLE LOW VOLTAGE SIDE		
Resistor type	MCT AT	TNPW e3
Imperial size	0603	0603
Maximum operating voltage, U <sub>max.</sub> AC <sub>RMS</sub> or DC (V)	75	75
Temperature coefficient (ppm/K)	± 25	± 25
Tolerance (%)	± 0.1	± 0.1
Resistance values (Ω)	1K	1K
	1.8K	1.8K
	3.3K	3.3K
	4.7K	4.7K
	6.8K	6.8K
	10K	10K
	15K	15K
	22K	22K
	33K	33K
	47K	47K

PART NUMBER AND PRODUCT DESCRIPTION	
Part number	LABHV01CHIPMELF
Product description	LAB HV 1 CHIP MELF

**Note**

- The product can be ordered using either the PART NUMBER or the PRODUCT DESCRIPTION