NEW

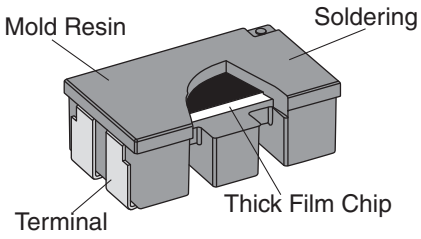
Coating Color - Black

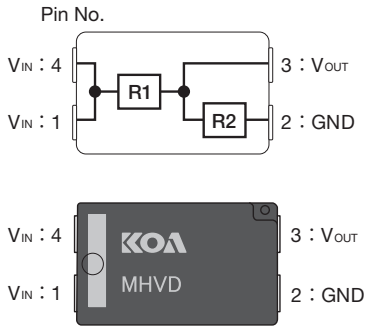
features

- Network Resistors for High voltage divider.
- Max. resistance value 51MΩ, Max. working voltage 1500V, Max. resistance ratio 500:1.
- Relative precision of pair resistors are guaranteed.
- Creepage is 12.5mm, which is suitable for 1250V on IEC-60664-1 pollution degree 2.
- Higher integration saves board space and overall assembly costs.
- Suitable for reflow soldering.
- Meets EU-RoHS requirements.
- AEC-Q200 Qualified.

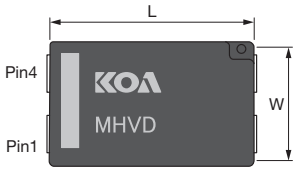
EU RoHS COMPLIANT

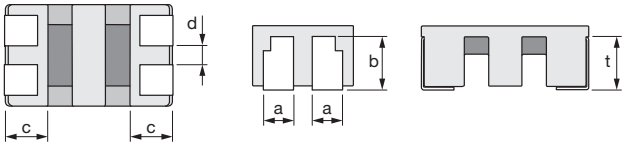
dimensions and construction





Dimensions inches *(mm)*						
L	W	t	a	b	c	d
0.45±0.02 *(11.5±0.5)*	0.28±0.008 *(7.0±0.2)*	0.17±0.006 *(4.35±0.15)*	0.083±0.008 *(2.1±0.2)*	0.14±0.012 *(3.5±0.3)*	0.09±0.12 *(2.3±0.3)*	0.05±0.008 *(1.3±0.2)*





ordering information

MHVD	A04	T	TEB	XXXXXX
Circuit Code	**Package Symbol**	**Terminal Surface Material**	**Taping Number**	**Product Identification Number**
MHVD: Thick film High Voltage Divider molded type	Package type symbol + number of pins	T: Sn	TEB: 12mm pitch plastic embossed	

Contact us when you have a control request for environmental hazardous material other than the substance specified by EU-RoHS.

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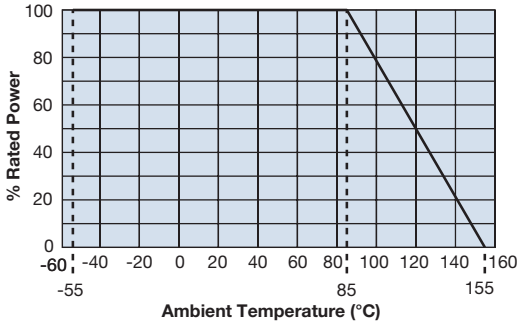
applications and ratings

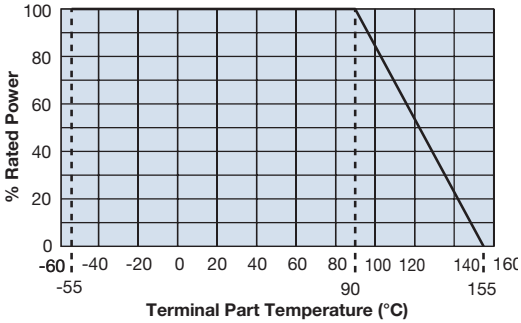
Power Rating (Vin-GND)	Rated Ambient Temp	Rated Terminal Part Temp.	Resistance Range Resistance Ratio 100.1~500.1 (R1+R2)/R2		Absolute Resistance Tolerance (R1)	Relative Resistance Tolerance	T.C.R. (x10^{-6}/K)	T.C.R. Tracking (x10^{-6}/K)	Max Working Voltage (Vin-GND)	Max Overload Voltage (Vin-GND)	Operating Temperature Range
			R1(E24/E96))	R2							
1W	85°C	90°C	0.5MΩ~51MΩ	1kΩ~510kΩ	±0.25% ±0.5%	0.25% 0.5%	±50	25 50	1500V	3000V	-55•C~+155•C

Rated voltage = √Power rating x resistance value or max. working voltage, whichever is lower. Guaranteed value differs depending on power usage. Please see the Performance table below. Relative Tolerance is calculated by | Dev.R1 - Dev.R2 |, TCR Tracking is | T.C.R. R1 - T.C.R. R2 |.

environmental applications

Derating Curve





For resistors operated at an ambient temperature of 85°C or higher, the power shall be derated in accordance with the above derating curve. For more details on derating click here "*Derating Curves – Caution & Terms*."

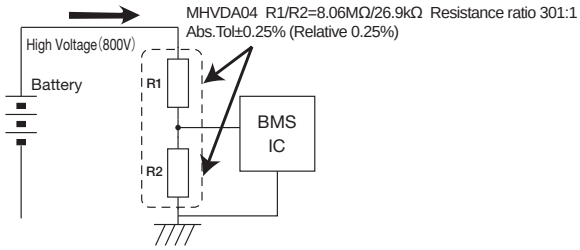
Performance Characteristics

Parameter	Performance Requirement (Ratio) Δ R		Test Method
	Limit	Typical	
Resistance	Within specified tolerance	—	25°C
T.C.R.	Within specified T.C.R.	—	+25°C/-55°C, +25°C/+125°C
Overload (Short time)	0.5%	0.1%	Rated Voltage x2 for 5s
Resistance to Soldering Heat	0.25%	0.1%	260°C ± 5°C, 10 seconds ± 1 second
Rapid Change of Temperature	0.4%	0.2%	-55°C (15 minutes) / +155°C (15 minutes), 1000 cycles
Moisture Resistance	0.4%	0.2%	85°C ± 2°C, 85%±3% RH, 1000 hours. Rating power 10% within 500V
Endurance at 85°C	1.0W: 0.4[1] 0.5W:0.2[1]	0.2% 0.1%	85°C ± 2°C, 1000 hours, 1.5 hr ON/0.5 hr OFF cycles
High Temperature Exposure	0.4%	0.2%	+155°C, 1000 hours

[1] The power shall be derated in accordance with the derating curve with operated power (within 0.5W or 1.0W) as 100% each.

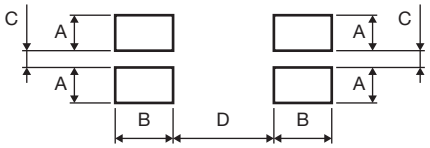
Example of Application

Battery Management System (Voltage Monitoring)



Recommended Pad Dimensions

The optimum dimension of soldering pad at the time of soldering differs according to conditions, however, the following pad dimensions are recommended as standard.



Dimensions inches *(mm)*	
A	0.091 *(2.3)*
B	0.12 *(3.1)*
C	0.043 *(1.1)*
D	0.26 *(6.5)*

These pad dimensions are only for standard pattern and the characteristics are not guaranteed, which you are suggested to confirm before use.

If pad size on both sides are different, force to one side might occur when cooling solder because of different amount of solder paste. Please design uniform pad size.

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