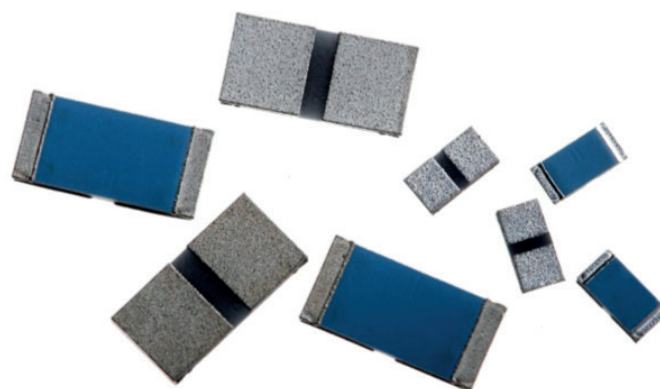


HPDC Series

Features

- Aluminium nitride (AlN) substrate
- Wide area solder terminations
- Offers >3 x standard power density
- Power rating up to 3.5W @70°C
- Thick film element



 All parts are Pb-free and comply with EU Directive 2011/65/EU amended by (EU) 2015/863 (RoHS3)

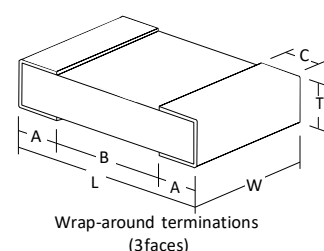
Electrical Data

		1206	2512
Power @70°C ¹	W	2.4	3.5
Resistance range	ohms	10R to 2K0	3R0 to 2K0
Tolerance	%	1, 5	
LEV	V	200	
TCR	ppm/°C	±150	
Operating temperature	°C	-55 to +155	
Values		±1%: E24 or E96 preferred	5%: E24 preferred

Note 1: The power rating depends on the maximum temperature of the resistive element. The maximum power rating only applies if the temperature of the resistive element is maintained below 155°C.

Physical Data

Dimensions (mm) & Weight (mg)							
	L	W	T max	A	B min	C	Wt.
1206	3.1±0.13	1.52±0.13	0.64	1.22±0.13	0.27	0.38±0.13	7.1
2512	6.35±0.13	3.15±0.13	0.64	2.7±0.1	0.62	0.6±0.25	30.7



Construction

Thick film resistor material, overglaze and organic protection are screen printed on an aluminium nitride substrate. Wrap-around terminations have an electro-plated nickel barrier and solderable coating. This ensures excellent 'leach' resistance properties and solderability.

Marking

Components are not marked. Reels are marked with type, value, tolerance, date code and quantity.

Solvent Resistance

The body protection is resistant to all normal industrial cleaning solvents suitable for printed circuits.

General Note

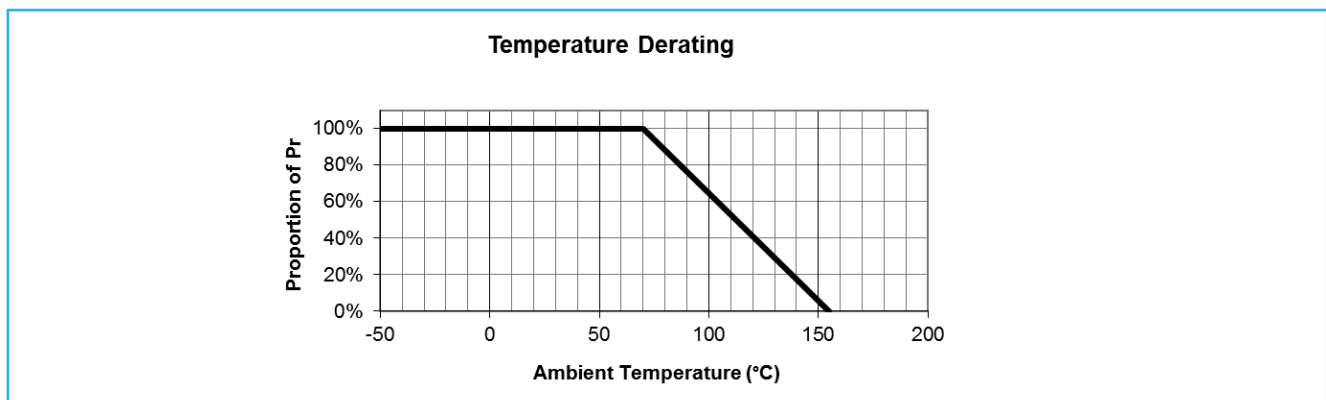
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HPDC Series

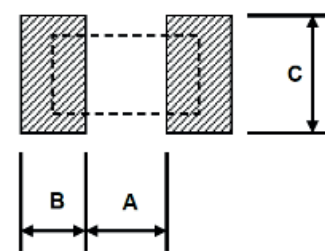
Performance Data

		Maximum	Typical
Load at rated power: 1000 hours at 70°C	±ΔR%	0.5	0.2
Overload: 1206: 4.7W for 5 seconds 2512: 7.7W for 5 seconds	±ΔR%	0.5	0.1
Moisture resistance: 65°C, ≥80% RH, 240 hours	±ΔR%	0.5	0.15
High temperature exposure: +150°C, 1000 hours	±ΔR%	0.5	0.1
Solderability: 245±5°C for 3 seconds		95% min coverage	
Resistance to solder heat	±ΔR%	0.5	0.2

Thermal Performance Data



Recommended Solder Pads

Dimensions (mm)				
	A	B	C	
1206	0.46	1.73	1.68	
2512	0.61	3.40	3.30	

Packaging

HPDC1206 resistors are supplied in 8 mm wide paper carrier tape at 4mm pitch. HPDC2512 resistors are supplied in 12mm wide embossed plastic tape at 4mm pitch. Both sizes are on 7-inch reels at quantities shown in Ordering Procedure.

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HPDC Series

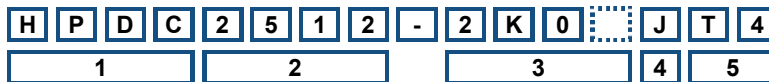
Application Notes

HPDC resistors are ideally suited for handling by automatic methods due to their rectangular shape and the small dimensional tolerances. Electrical connection to a ceramic substrate or to a printed circuit board can be made by reflow or wave soldering of wrap-around terminations. Wrap-around terminations provide good leach properties and ensure reliable contact. Due to the robust construction, the HPDC can be immersed in the solder bath for 30 seconds at 260°C. This enables the resistor to be mounted on one side of a printed circuit board and wire-leaded components applied on the other side. HPDC is compatible with typical Pb-free soldering materials and temperature profiles.

These high power resistors may also be used in temperature controlled heating applications in which the power applied is restricted only by the maximum element temperature of 155°C and the maximum termination temperature of 110°C.

Ordering Procedure

Example: HPDC2512-2K0JT4 (HPDC2512, 2 kilohms ±5%, Pb-free)



1	2	3	4	5		
Type	Size	Value	Tolerance	Packing		
HPDC	1206	E24 = 3/4 characters	F = ±1%	T5	1206	5000 / 7" reel
	2512	E96 = 3/4 characters R = ohms K = kilohms	J = ±5%	T4	2512	4000 / 7" reel

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