

DATA SHEET FOR VARISTOR

Part No.	HEL 10D221K
Class	K Series
Approvals	UL File No. E324904
	CSA File No. 215101
	VDE File No. 40037512
	CQC File No. CQC04001010845 (5D Series)
	CQC File No. CQC04001010847 (7D Series)
	CQC File No. CQC04001010846 (10D Series)
	CQC File No. CQC04001010844 (14D Series)
	CQC File No. CQC04001010848 (20D Series)
Note: Ref. to the corresponding safety certifications for various specifications of varistor series, pls see page 10.	

Customer:			Supplier: HONG ZHI ELECTRONICS CO.,LTD.		
APPROVAL			APPROVAL		
Approval			Approval	Edit	Date

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Contents

HEL Product-How to order.....	Page 3
Dimension & Electrical Characteristics.....	Page 4
Surge current impact level.....	Page 5
Derating curves & V/I Characteristics drawings.....	Page 6
HEL Varistor Technical Term	Page 7
HEL Varistor Technological & Mechanical Characteristics	Page 8
HEL Varistor Security and Environmental Test.....	Page 8~9
Safety Standards Approval.....	Page 10
Packaging methods and storage conditions.....	Page 11~14

HEL Product----How to order

Outline Drawings

Dimension & Electrical Characteristics

1. Dimension

2. Electrical Characteristics

Part No.	Varistor Voltage	Maximum Allowable Voltage		Maximum Clamping Voltage	Withstanding Surge Current		Rated Wattage	Energy	Typical Capacitance
	V _{1mA} (V)	AC (V)	DC (V)	V _{25A} (V)	I _{max} (8/20 μs) (A)	I _n (15 times) (8/20 μs) (A)	(W)	(10/1000 μs) (J)	1kHz (PF)
HEL 10D221K	220 (198~242)	140	180	360	2500	1,500	0.4	35	440

Surge current impact level

Product Level		K Coventional Version		KJ Enhanced Version		KH Super Enhanced Version		KX Customized Version	
Part No.	VImA (V)	Withstanding Surge Current (Imax) (A)	Impulse Current 15 times 8/20 μ s (A)	Withstanding Surge Current (Imax) (A)	Impulse Current 15 times 8/20 μ s (A)	Withstanding Surge Current (Imax) (A)	Impulse Voltage 40 times 1.2/50 μ s (V)	Super High Energy	
5D	82~750	400	150	800	250	800	1000		
7D	82~820	1200	500	1750	1000	1750	2000		
10D	82~1800	2500	1500	3500	1500	3500	4000		
14D	82~1800	4500	3000	6000	3000	6000	6000		
20D	82~1800	6500	3000	10000	5000	10000	10000		
5D	18~68	100	—	250	150	—	—		1 Example
7D	18~68	250	—	500	250	—	—		14D instead of 20D
10D	18~68	500	—	1000	500	—	—		2 Example
14D	18~68	1000	—	2000	1000	—	—		HEL14D561KX
20D	18~68	2000	—	3000	1000	—	—		reach 6kV/3kA 100 times
In accordance with International and National Standards		IEC61051-1 GB/T10193 IEC61051-2 GB/T10194 IEC61051-2-2 GB/T10195 CSA-C22.2 UL1449		Include the left column, and add the following: IEC60950-1:2005/Annex Q GB4943.1-2011 GB8898-2011 UL1449		Include the left column, and add the following: IEC61000-4-5 GB/T17626.5 IEC61643-331 GB/T18802.331			

Remark: the Impulse voltage testing standards(1.2/50 μ s) with 40 times are only applicable to the products which with the varistor voltage more than 430V.

Derating curves & V/I characteristics

Safety regulation certification and Corresponding models

Packaging methods and storage conditions

1. Taping Packaging Method

(1) Plug-in taping packaging method

Carton size: 540mm×350mm×300mm

Series	Varistor Voltage	Taping Packaging Quantity	
		QTY (k)/Carton	QTY (k)/Inner Box
5D	180~511K	18	1.5
	561K~681K	12	1
7D	180~511K	18	1.5
	561K~821K	12	1
10D	180~471K	12	1
		6	0.5
	511K~112K	6	0.5
14D	180~681K	4	0.5
	751K~182K	3.2	0.4
20D	180~301K	4	0.5
	331K~122K	2	0.25

Note: The inner box packing is the smallest package

(2) Flat foot taping packaging

Carton size: 355mm×350mm×365mm

Series	Taping Packaging Quantity		
	QTY (k)/Carton	Reel QTY/Carton	QTY (k)/Reel
7D	12	12	1
10D	4.5	9	0.5
14D	3.5	7	0.5

Note: The Reel packing is the smallest package

2. Bulk Packing

Carton size: 435mm×280mm×200mm

Series	Varistor Voltage	Regular lead length		Short cutting lead length	
		QTY (k)/Carton	QTY (k)/Inner Box	QTY (k)/Carton	QTY (k)/Inner Box
5D	180~471K	24	4	25	5
	511K~681K	18	3	25	5
7D	180~561K	18	3	25	5
	621K~821K	12	2	25	5
10D	180~681K	9	1.5	12	2
	751K~112K	6	1	12	2
14D	180~681K	6	1	6	1
	751K~182K	3	0.5	6	1
20D	180~751K	3	0.5	3	0.5
	821K~182K	1.5	0.25	3	0.5

Note: The inner box packing is the smallest package

3. storage conditions

Storage conditions

temperature: -40°C~+125°C

humidity: < 65%RH

Recommended storage conditions

temperature: -10°C~+45°C

humidity: < 55%RH

Plug-in Tape Packing

Flat Knitting Tape Packing