

## 7D系列 HEL 压敏电阻 HEL VARISTOR WITH 7MM DIAMETER

型号规格 Part No.	压敏电压 Varistor Voltage		最大允许 使用电压 Maximum Allowable Voltage		最大限制 电压 Maximum Clamping Voltage		通流容量 Withstanding Surge Current (8/20 $\mu$ s) 1 time		静态功率 Rated Wattage		能量容量 Energy (2ms)		静态电容 容值 (参考值) Typical Capacitance
	$V_{1mA}$ (V)	AC (V)	DC (V)	$V_{10A}$ (V)	K class (A)	KJ class (A)	(W)	K (J)	KJ (J)	1kHz (PF)			
HEL-7D180	18	(16-20)	11	14	· 38	250	500	0.02	0.8	0.9	3,500		
HEL-7D220	22	(20-24)	14	18	· 43	250	500	0.02	0.9	1.2	2,800		
HEL-7D270	27	(24-30)	17	22	· 53	250	500	0.02	1.1	1.4	2,200		
HEL-7D330	33	(30-36)	20	26	· 65	250	500	0.02	1.4	1.7	1,800		
HEL-7D390	39	(35-43)	25	31	· 77	250	500	0.02	1.6	2.0	1,450		
HEL-7D470	47	(42-52)	30	38	· 93	250	500	0.02	2.0	2.5	1,150		
HEL-7D560	56	(50-62)	35	45	· 110	250	500	0.02	2.4	2.9	1,050		
HEL-7D680	68	(61-75)	40	56	· 135	250	500	0.02	2.9	3.6	970		
HEL-7D820	82	(74-90)	50	65	135	1200	1750	0.25	3.4	4.3	930		
HEL-7D101	100	(90-110)	60	85	165	1200	1750	0.25	4.2	5.3	860		
HEL-7D121	120	(108-132)	75	100	200	1200	1750	0.25	5.0	6.3	670		
HEL-7D151	150	(135-165)	95	125	250	1200	1750	0.25	6.3	7.9	490		
HEL-7D181	180	(162-198)	115	150	300	1200	1750	0.25	7.6	9.5	330		
HEL-7D201	200	(180-220)	130	170	340	1200	1750	0.25	8.4	10.5	240		
HEL-7D221	220	(198-242)	140	180	360	1200	1750	0.25	9.2	11.6	190		
HEL-7D241	240	(216-264)	150	200	395	1200	1750	0.25	10.1	12.6	165		
HEL-7D271	270	(243-297)	175	225	455	1200	1750	0.25	11.3	14.2	150		
HEL-7D301	300	(270-330)	195	250	505	1200	1750	0.25	12.6	15.8	135		
HEL-7D331	330	(297-363)	210	275	550	1200	1750	0.25	13.9	17.3	130		
HEL-7D361	360	(324-396)	230	300	595	1200	1750	0.25	15.1	18.9	125		
HEL-7D391	390	(351-429)	250	320	650	1200	1750	0.25	16.4	20.5	105		
HEL-7D431	430	(387-473)	275	350	710	1200	1750	0.25	18.1	22.6	100		
HEL-7D471	470	(423-517)	300	385	775	1200	1750	0.25	19.7	24.7	90		
HEL-7D511	510	(459-561)	320	418	842	1200	1750	0.25	21.4	26.8	80		
HEL-7D561	560	(504-616)	350	460	920	1200	1750	0.25	23.5	29.4	75		
HEL-7D621	620	(558-682)	385	505	1025	1200	1750	0.25	26.0	32.6	70		
HEL-7D681	680	(612-748)	420	560	1120	1200	1750	0.25	28.6	35.7	65		
HEL-7D751	750	(675-825)	460	615	1240	1200	1750	0.25	31.5	39.4	61		
HEL-7D781	780	(702-858)	485	640	1290	1200	1750	0.25	32.8	41.0	54		
HEL-7D821	820	(738-902)	510	670	1355	1200	1750	0.25	34.4	43.1	48		

• The clamping voltage from 180K to 680K is tested with current 2.5A.

Note: The energy (10/1000  $\mu$ s) is about 1.4 times of energy (2ms).

• 180K至680K最大限制电压测试电流是2.5A.

注: 10/1000  $\mu$ s的能量耐量值约为2ms能量耐量值的1.4倍

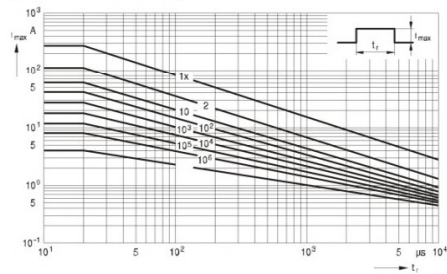
## 降额曲线图 Derating curves

横轴是冲击时间即浪涌型宽度, 纵轴是冲击电流峰值,

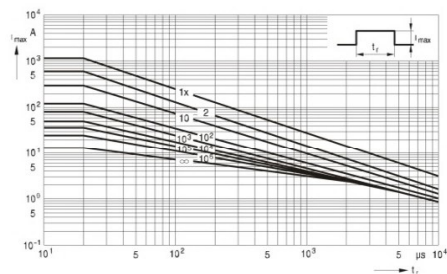
线上的数字是冲击次数;

Maximum surge current  $I_{max} = f(t_r, \text{pulse train})$

HEL-7D180-680K



HEL-7D820-751K



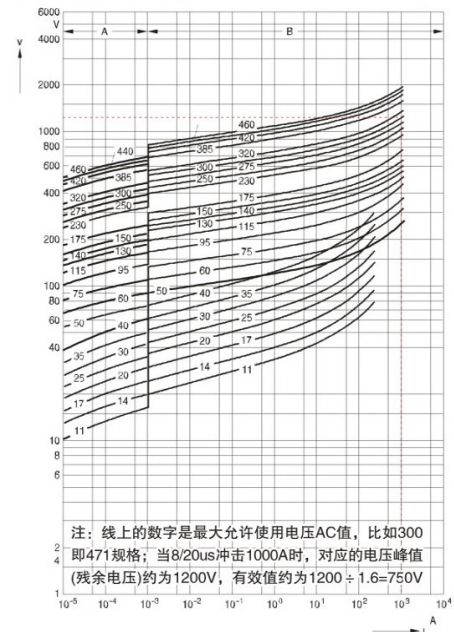
## 伏安特性图 v/i characteristics

A区是泄漏电流区, A = Leakage current,

B区是冲击电流与限制电压对应区

B = Protection level for worst-case varistor tolerances

HEL-7D180-751K



## 产品尺寸 DIMENSION

单位Unit: mm

产品外型 Product Shape	系列 Series	压敏电压 Varistor Voltage	厚度 Tmax
	7D	18V-39V	5.5
		47V-68V	6.0
		82V-150V	6.5
		180V-270V	7.0
		330V-390V	7.5
		430V-560V	8.0
		620V-780V	8.5
		820V	9.0

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