

20D系列 HEL 压敏电阻 HEL VARISTOR WITH 20MM DIAMETER

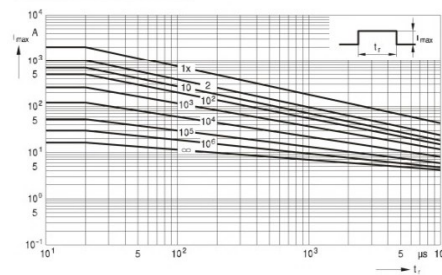
型号规格 Part No.	压敏电压 Varistor Voltage		最大允许使用电压 Maximum Allowable Voltage		最大限制电压 Maximum Clamping Voltage		通流容量 Withstanding Surge Current (8/20 μs) 1 time		静态功率 Rated Wattage		能量耐量 Energy (2ms)		静态电容量 (参考值) Typical Capacitance
	V _{1mA} (V)	AC (V)	DC (V)	V _{100A} (V)	K class (A)	KJ class (A)	(W)	K (J)	KJ (J)	1kHz (PF)			
HEL-20D180	18	(16-20)	11	14	·38	2,000	3,000	0.2	5.4	6.8	39,000		
HEL-20D220	22	(20-24)	14	18	·43	2,000	3,000	0.2	6.6	8.3	32,000		
HEL-20D270	27	(24-30)	17	22	·53	2,000	3,000	0.2	8.1	10.1	22,000		
HEL-20D330	33	(30-36)	20	26	·65	2,000	3,000	0.2	9.9	12.4	18,000		
HEL-20D390	39	(35-43)	25	31	·77	2,000	3,000	0.2	11.7	14.6	16,000		
HEL-20D470	47	(42-52)	30	38	·93	2,000	3,000	0.2	14.1	17.6	14,000		
HEL-20D560	56	(50-62)	35	45	·110	2,000	3,000	0.2	16.8	21.0	12,000		
HEL-20D680	68	(61-75)	40	56	·135	2,000	3,000	0.2	20.4	25.5	10,000		
HEL-20D820	82	(74-90)	50	65	135	6,500	10,000	1.0	24.6	30.8	5,800		
HEL-20D101	100	(90-110)	60	85	165	6,500	10,000	1.0	30.0	37.5	4,800		
HEL-20D121	120	(108-132)	75	100	200	6,500	10,000	1.0	36.0	45.0	3,800		
HEL-20D151	150	(135-165)	95	125	250	6,500	10,000	1.0	45.0	56.3	3,000		
HEL-20D181	180	(162-198)	115	150	300	6,500	10,000	1.0	54.0	67.5	2,600		
HEL-20D201	200	(185-225)	130	170	340	6,500	10,000	1.0	60.0	75.0	2,400		
HEL-20D221	220	(198-242)	140	180	360	6,500	10,000	1.0	66.0	82.5	1,800		
HEL-20D241	240	(216-264)	150	200	395	6,500	10,000	1.0	72.0	90.0	1,500		
HEL-20D271	270	(243-297)	175	225	455	6,500	10,000	1.0	81.0	101.3	1,400		
HEL-20D301	300	(270-330)	195	250	505	6,500	10,000	1.0	90.0	112.5	1,350		
HEL-20D331	330	(297-363)	210	275	550	6,500	10,000	1.0	99.0	123.8	1,300		
HEL-20D361	360	(324-396)	230	300	595	6,500	10,000	1.0	108.0	135.0	1,250		
HEL-20D391	390	(351-429)	250	320	650	6,500	10,000	1.0	117.0	146.3	1,180		
HEL-20D431	430	(387-473)	275	350	710	6,500	10,000	1.0	129.0	161.3	1,100		
HEL-20D471	470	(423-517)	300	385	775	6,500	10,000	1.0	141.0	176.3	1,050		
HEL-20D511	510	(459-561)	320	418	842	6,500	10,000	1.0	153.0	191.3	1,000		
HEL-20D561	560	(504-616)	350	460	920	6,500	10,000	1.0	168.0	210.0	970		
HEL-20D621	620	(558-682)	385	505	1,025	6,500	10,000	1.0	186.0	232.5	950		
HEL-20D681	680	(612-748)	420	560	1,120	6,500	10,000	1.0	186.0	232.5	900		
HEL-20D751	750	(675-825)	460	615	1,240	6,500	10,000	1.0	186.0	232.5	850		
HEL-20D781	780	(702-858)	485	640	1,290	6,500	10,000	1.0	187.2	234.0	750		
HEL-20D821	820	(738-902)	510	670	1,355	6,500	10,000	1.0	196.8	246.0	700		
HEL-20D911	910	(819-1001)	550	745	1,500	6,500	10,000	1.0	218.4	273.0	600		
HEL-20D951	950	(855-1045)	580	780	1,570	6,500	10,000	1.0	228.0	285.0	580		
HEL-20D102	1000	(900-1100)	625	825	1,650	6,500	10,000	1.0	240.0	300.0	500		
HEL-20D112	1100	(990-1210)	680	895	1,815	6,500	10,000	1.0	264.0	330.0	450		
HEL-20D152	1500	(1350-1650)	900	1,220	2,475	6,500	10,000	1.0	359.0	449.0	400		
HEL-20D182	1800	(1620-1980)	1,000	1,465	2,970	6,500	10,000	1.0	432.0	540.0	220		

• The clamping voltage from 180K to 680K is tested with current 25A.
 Note: The energy (10/1000 μs) is about 1.4 times of energy (2ms).
 • 180K至680K最大限制电压测试电流是 25A.
 注: 10/1000 μs的能量耐量值约为2ms能量耐量值的1.4倍

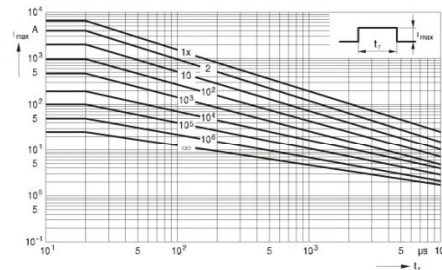
降额曲线图 Derating curves

横轴是冲击时间即浪涌波型宽度，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-20D180-680K



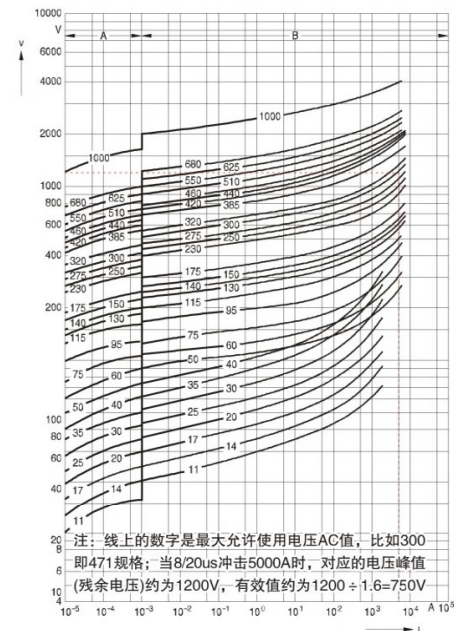
HEL-20D820-182K



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-20D180-182K



注：线上的数字是最大允许使用电压AC值，比如300即471规格；当8/20us冲击5000A时，对应的电压峰值(残余电压)约为1200V，有效值约为1200 ÷ 1.6=750V

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 (mm)
	20D	18V-39V	8.5
		47V-68V	9.0
		82V-150V	9.5
		180V-270V	10.0
		330V-390V	10.5
		430V-560V	11.0
		620V-780V	11.5
		820V-1200V	12.0
		1300V-1500V	12.5
		1600V-1800V	13.0