Specifications 技术参数

Dc Power Fuses
North American Style

Ratings & Features Applications 电气参数/功能应用领域:

- ✧ Volts电压: 500Vdc;
- ✧ Amps电流: 35-800A;
- ✧ Interrupting Capacity 分断;

Max Bc： 50kA 500Vdc;
Class of Operation： **aR**
Design For Dc Applications 直流应用设计;
Excellent Dc Performance 卓越的直流分断能力;
Low arc voltage and low energy let-through(I2t) 焦耳积分放通量小;
Superior cycling capability 可循环利用率高
Low Watt Losses 低功率损耗;
Electrical Energy Storage 电能/储能;
DC Drives 直流驱动保护;
Reduced voltage starters 降压启动保护;
Power converters/rectifiers 电源转换/整流保护;
Battery pack protection 动力电池包保护;
Backup Protection For Dc Relay 直流继电器保护;

Standards / Approvals 认证/标准:

- ✧ Refer To UL248.13/IEC60269.6/GB31465.6/JASO-D622/ISO8820.8;

性能参考 UL248.13/IEC60269.6/GB31465.6/JASO-D622/ISO8820.8;;

- ✧ Manufactured Under a IATF16949 Quality System for Compliance with Automotive Requirements;

根据IATF16949质量体系制造符合汽车要求;

- ✧ Reach Declaration Available Upon Request;

可根据要求提供REACH声明;

- ✧ CE;
- ✧ RoHS Compliant.

符合RoHS。

Features & benefits 产品特性:

Higher voltage rating provides overall system efficiency using smaller, more economical conductors while meeting the needs of higher voltage. Up to ten times faster opening under high fault current conditions helps assure reliable protection of circuits and components. Can be applied in parallel to realize greater ampacity within sizing guidelines, Excellent power of resisting voltaic impingement and environment temperature tolerance, Excellent resistance to mechanical vibration and impact resistance.

满足高电压、小体积、更经济的提升整体系统效率，同时满足更高电压的需求。在大的故障电流条件下，断开速度更快，确保电路和部件的可靠保护。可以并行应用，实现尺寸范围内更大的载流量。良好的抗电流冲击能力以及冷、热环境温度耐受能力，具有优越的抗机械振动与冲击能力。

Product Model 产品型号说明:

HC	HV	F	500	-	300	A	-	38R

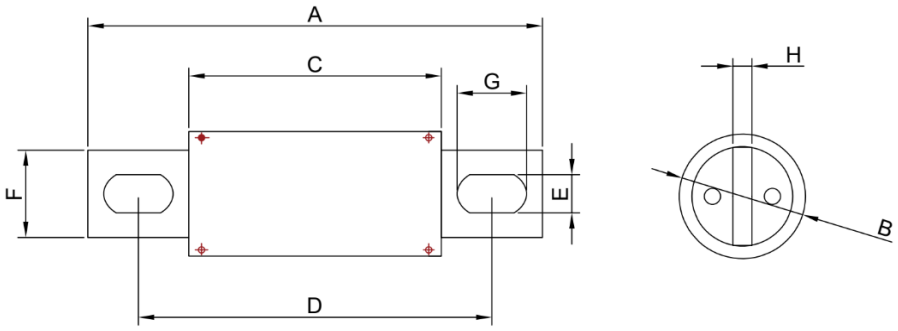
HC：Company Code
EV：Electric Vehicle
HV：High Speed
F：Fiberglass **T**：Ceramics
Rated Voltage：500：500V
Rated Current：300：300A
x：**Connect**： A, H, T
Type Series Code：20R, 26R, 31R, 38R, 51R

Fuse Ratings 额定参数

Rated Current		Catalog no.	Average @50KA/500Vdc		Power Loss W	Breaking Capacity
			Melting A²S	Clearing A²S	1.0In	
20 mm diameter case						
35	35A	HCHVF500-35A-20R	35	159	6	50kA
40	40A	HCHVF500-40A-20R	79	339	8	
50	50A	HCHVF500-50A-20R	165	820	8	
60	60A	HCHVF500-60A-20R	218	954	11	
26 mm diameter case						
70	70A	HCHVF500-70A-26R	218	954	11	50kA
80	80A	HCHVF500-80A-26R	317	1484	14	
90	90A	HCHVF500-90A-26R	374	1696	16	
100	100A	HCHVF500-100A-26R	494	2120	18	
125	125A	HCHVF500-125A-26R	980	4370	20	
150	150A	HCHVF500-150A-26R	1340	5250	24	
31 mm diameter case						
125	125A	HCHVF500-125A-31R	832	3710	27	50kA
150	150A	HCHVF500-150A-31R	1144	4876	30	
175	175A	HCHVF500-175A-31R	1508	6572	34	
200	200A	HCHVF500-200A-31R	1976	9010	40	
225	225A	HCHVF500-225A-31R	4970	20550	45	
250	250A	HCHVF500-250A-31R	8420	39700	49	
38 mm diameter case						
225	225A	HCHVF500-225A-38R	4784	24698	42	50kA
250	250A	HCHVF500-250A-38R	6552	34132	44	
275	275A	HCHVF500-275A-38R	8216	42718	49	
300	300A	HCHVF500-300A-38R	10192	52788	55	
325	325A	HCHVF500-325A-38R	14248	67628	57	
350	350A	HCHVF500-350A-38R	15080	77274	62	
400	400A	HCHVF500-400A-38R	19968	102502	66	
450	450A	HCHVF500-450A-38R	27500	145900	74	
51 mm diameter case						
450	450A	HCHVF500-450A-51R	25688	134620	70	50kA
500	500A	HCHVF500-500A-51R	30368	157940	85	
600	600A	HCHVF500-600A-51R	42952	218360	100	
630	630A	HCHVF500-630A-51R	52725	245600	107	
700	700A	HCHVF500-700A-51R	104200	396500	120	
800	800A	HCHVF500-800A-51R	115600	435000	145	

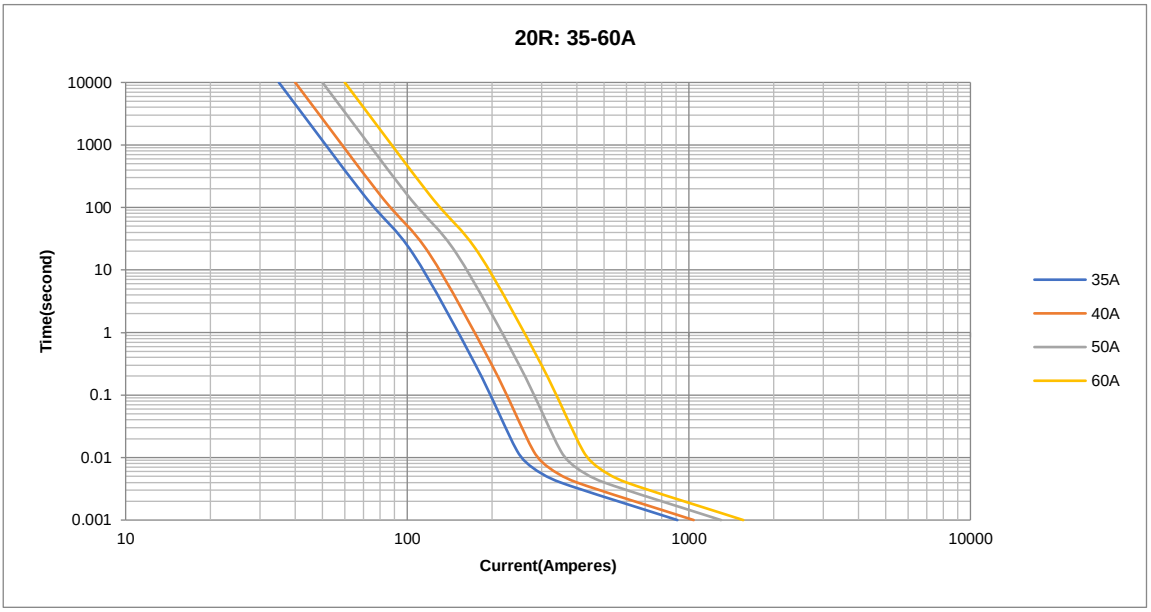
✧ DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25℃;

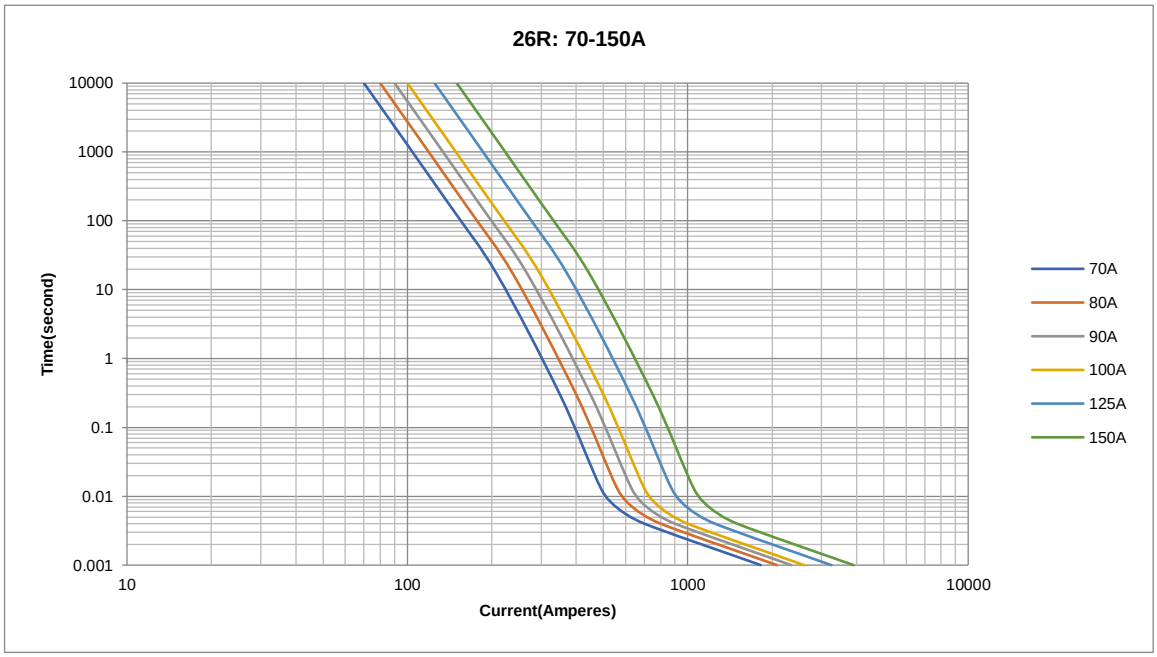
Dimensions (mm) 尺寸

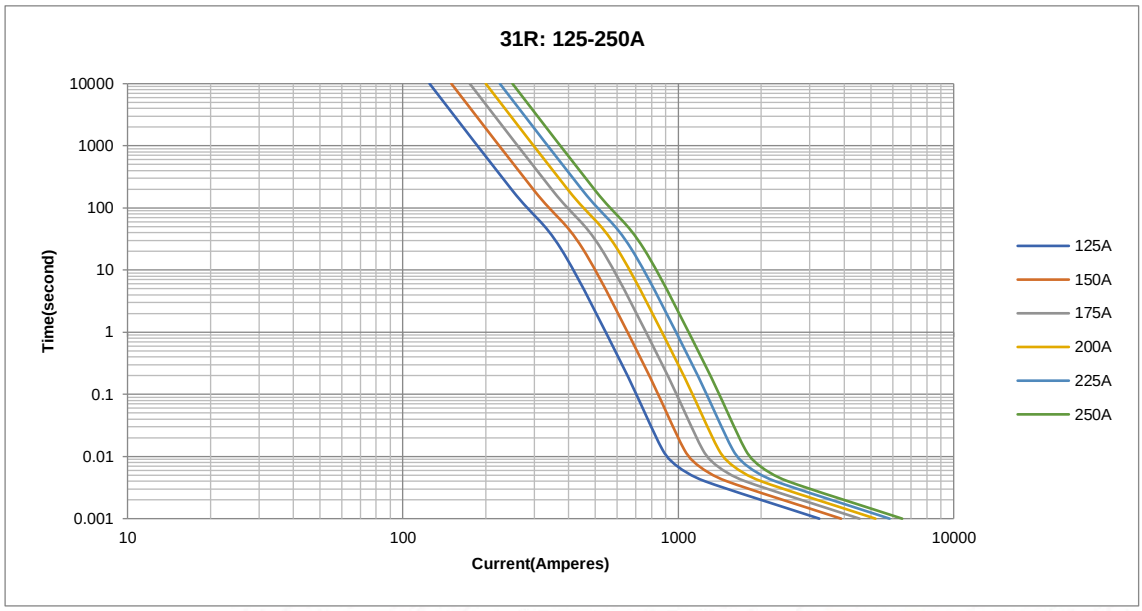


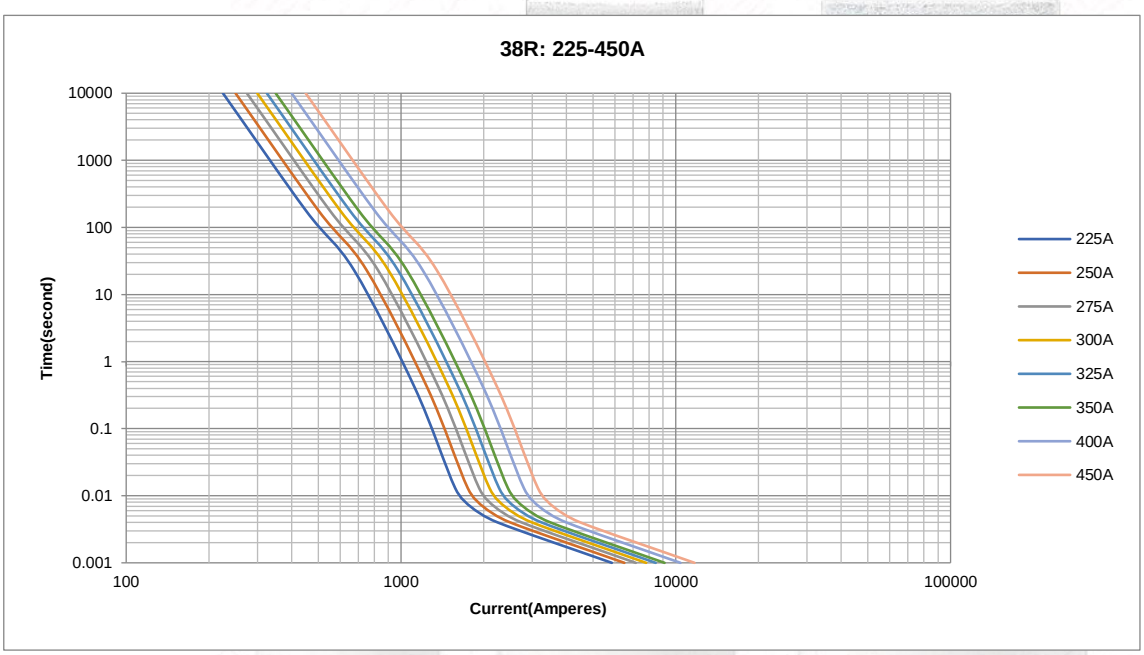
S.	电流范围	A±1.5	B±1	C±1	D±1.5	E±0.5	F±0.5	H±1	G±0.5
20R	35-60A	81	20	40	60.5	8.5	15	3	13
26R	70-150A	92	26	44	68.5	8.5	20	3	13
31R	125-250A	92	31	46	72.5	8.5	25	6	12.5
38R	225-450A	110	38	53	81.5	10.5	25	6	20
51R	450-800A	110	51	53	81.5	10.5	40	6	20

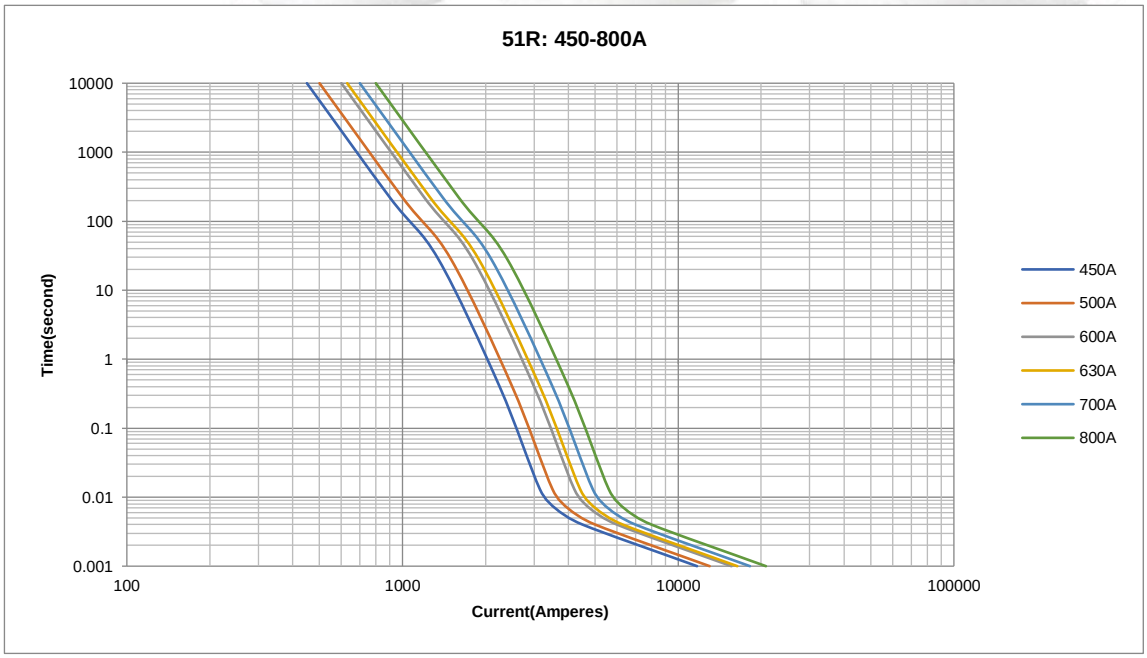
Time-Current Curve 时间电流曲线图






31R: 125-250A
Time(second)
10000
1000
100
10
1
0.1
0.01
0.001
10
100
1000
10000
Current(Amperes)
125A
150A
175A
200A
225A
250A


38R: 225-450A
Time(second)
10000
1000
100
10
1
0.1
0.01
0.001
100
1000
10000
100000
Current(Amperes)
225A
250A
275A
300A
325A
350A
400A
450A


51R: 450-800A
Time(second)
10000
1000
100
10
1
0.1
0.01
0.001
100
1000
10000
100000
Current(Amperes)
450A
500A
600A
630A
700A
800A

Operating conditions 使用条件

- ✧ Product storage Temperature: -40°C~120°C(-40°F~248°F)；
  产品存储温度：-40℃~120℃，在40℃时相对湿度不大于70%；
- ✧ Product storage Humidity: T=40°C RH≤70%, T≤30°C RH≤80%, T≤20°C RH≤90%;
  在30℃以下，产品相对湿度不大于80，在20℃以下，相对湿度不大于90%；
- ✧ Package storage Temperature: -40°C~80°C(-40°F~176°F);
  包装存储温度：-40℃~80℃；
- ✧ Fuses can perform regularly under the flowing conditions without corrections;
  熔断器在下述的正常使用条件下工作，不需要额外的修正；
- ✧ Regular current flow should ≤ 75% of recommended rated current;
  推荐长期通流的电流值不大于额定电流的75%；
- ✧ High frequency vibration resistance:≧20g;
  本系列熔断器有良好的抗振动和冲击的耐受能力，可承受20g以上的加速度；
- ✧ Intense vibration and shocking conditions need more tests.
  振动较为强烈的应用环境，可商议进行对应测试，一般要经过较长的周期。
- ✧ Replacing fuses if damaging facilities;
  对有机械损伤的熔断器必须进行更换；
- ✧ DO NOT change fuses while loading unless MUST.
  除非使用要求允许，如熔断器式负荷开关，否则请勿带负载更换熔断器。
- ✧ Operating temperature: -5°C~40°C（23°F~104°F）；
  正常使用条件：-5℃~40℃；
- ✧ Allowable operating temperature:-40°C~125°C（-40°F~257°F）；
  允许使用条件：-40℃~125℃；
- ✧ Temperature correction factors: when below -5°C（23°F）, low overload (L.O.) pre-arcing time will slightly extend, rated current will slightly increase;
  周围空气温度变化的参数修正：在低于-5℃下工作，熔断器的低倍过载电流的弧前时间略有延长，额定电流略有增大，但是除非-5℃以上不是工作范围，一般不参考增加熔断器额定电流；
- ✧ If operating above 40°C（104°F），rated current need extra corrections, factors: -Kt①.
  熔断器在40℃以上工作，额定电流需要额外的修正，修正系数为-Kt。

*Note①:Kt value has already considered the safety current allowance under regular operating scenarios.

*注1：Kt的取值已考虑熔断器在正常工作条件下的额定电流安全余量的影响。