

Electric vehicle power fuses — EVK series (1000 Vdc, 15-600A)

Description:

Eaton's Bussmann series Electric Vehicle (EV) full range fuses for the protection of auxiliary electrical systems up to 1000 Vdc in ratings from 15 to 600 amps.

Specifications:

- Volts - 1000 Vdc
- Amps – 15-600 A
- Interrupting rating

Max	DC 25 kA as baseline
Min	<=200A, 135%, DC
	>200A, 200%, DC
- Time constant - 3ms
- Ambient temperature
-40 ~ 125 degree centigrade
- Altitude: <=2000 meter

Catalog symbol:

- | | |
|-----------------|---------|
| • EVK10-(amp)-T | bolt-on |
| • EVK14-(amp)-T | bolt-on |
| • EVK22-(amp)-T | bolt-on |
| • EVK25-(amp) | bolt-on |
| • EVK30-(amp) | bolt-on |
| • EVK40-(amp) | bolt-on |
| • EVK50-(amp) | bolt-on |
| • EVK60-(amp) | bolt-on |

Agency information

- Designed to:
 - UL248-20
 - ISO8820-8
 - JASO D622
- Manufactured under ITAF16949/VDA6.3 quality system for compliance with automotive requirements
- RoHS compliant
- REACH declaration available upon request

Packaging and installation suggestion

See below table

Features:

- Higher voltage rating provides overall system efficiency using smaller, more economical conductors while meeting the needs of higher voltage battery packs
- Higher interrupting rating protects high capacity battery packs needed for vehicle acceleration and range requirements

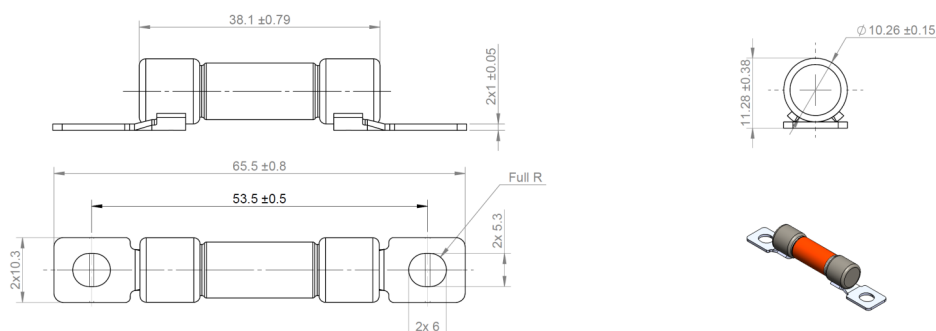
Basic information:

P/N	Current (A)				Packing quantity	Screw	Tightening torque (Nm)
					(per container)		
EVK10-XX-T	15	20	25	30	270	M5	4.5±1
EVK14-XX-T		35	40	50	75	M5	4.5±1
EVK22-XX-T		60	70	80	100	M6	9±1
EVK25-XX	70	80	90	100	195	M8	12±1
EVK30-XX	125	150	175	200	75	M8	12±1
EVK40-XX	225	250	275	300	85	M10	20±1
EVK50-XX			350	400	28	M10	20±1
EVK60-XX	450	500	550	600	18	M10	20±1

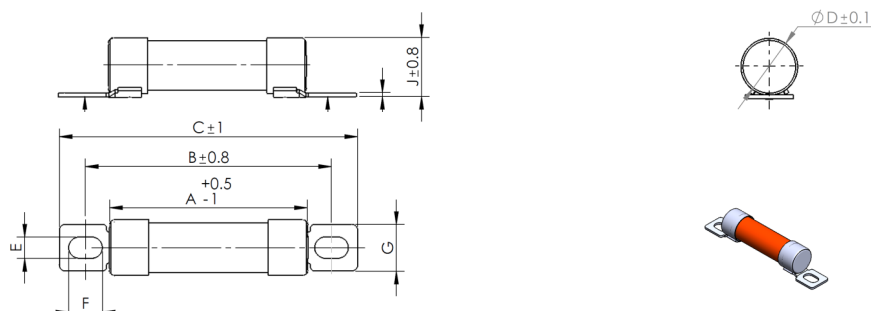
Electric vehicle power fuses — EVK series (1000 Vdc, 15-600A)

Dimensions: mm

EVK10

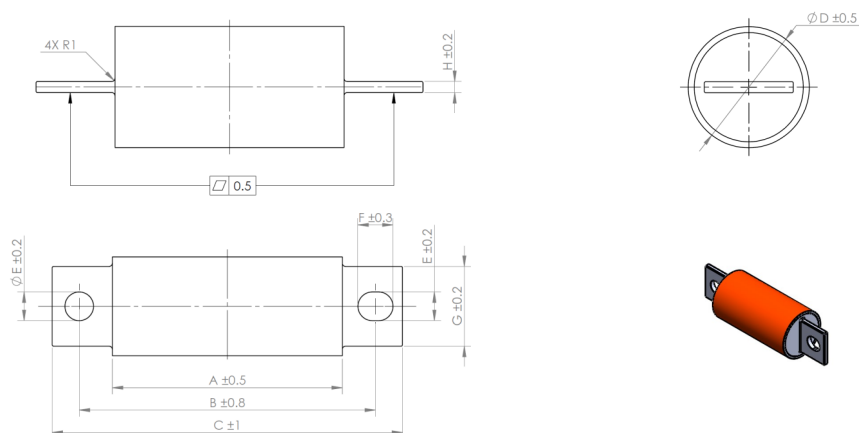


EVK14 EVK22



Size	Current Rating (A)	A	B	C	D	E	F	G	H	J
EVK14	35 ~ 50	51.0	63.5	77.0	14.3	5.5	8.0	12.0	0.8	15.1
EVK22	60 ~ 80	58.0	75.0	90.0	22.2	6.5	9.0	16.0	1.0	23.2

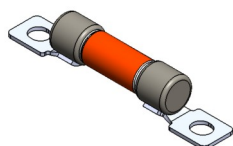
EVK25 EVK30 EVK40 EVK50 EVK60



Size	Current Rating (A)	A	B	C	D	E	F	G	H
EVK25	70 ~ 120	72.2	93.0	110.0	25.4	9.0	11.0	19.0	2.2
EVK30	125 ~ 200	72.2	93.0	110.0	31.0	9.0	11.0	25.0	3.0
EVK40	225 ~ 300	72.2	100.0	122.0	38.1	11.0	13.0	28.0	3.5
EVK50	350 ~ 400	72.2	100.0	122.0	50.8	11.0	13.0	28.0	5.0
EVK60	450 ~ 600	72.2	100.0	122.0	63.5	11.0	13.0	40.0	6.0

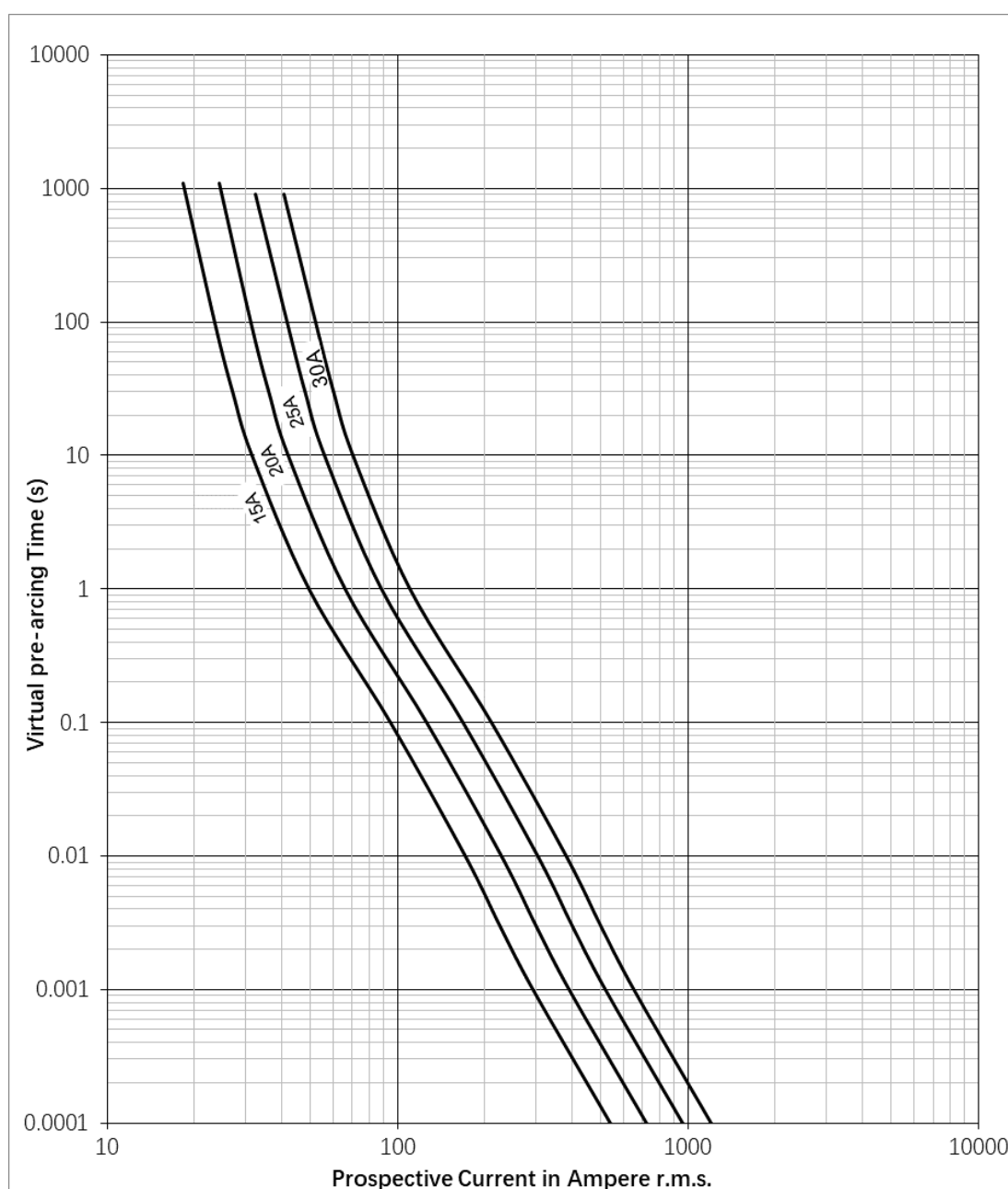
Electric vehicle power fuses — EVK10-xxx-T (1000 Vdc, 15-30A)

Technical parameter:



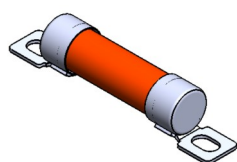
Voltage Rating (V)	Current Rating I_n (A)	Pre-arcing I^2t (A ² s)	Total I^2t (A ² s)	Power dissipation at 0.5 I_n (W)
1000Vdc	15	150	700	0.7
	20	270	1,200	0.9
	25	480	2,200	1.1
	30	750	3,400	1.3

T-C curve



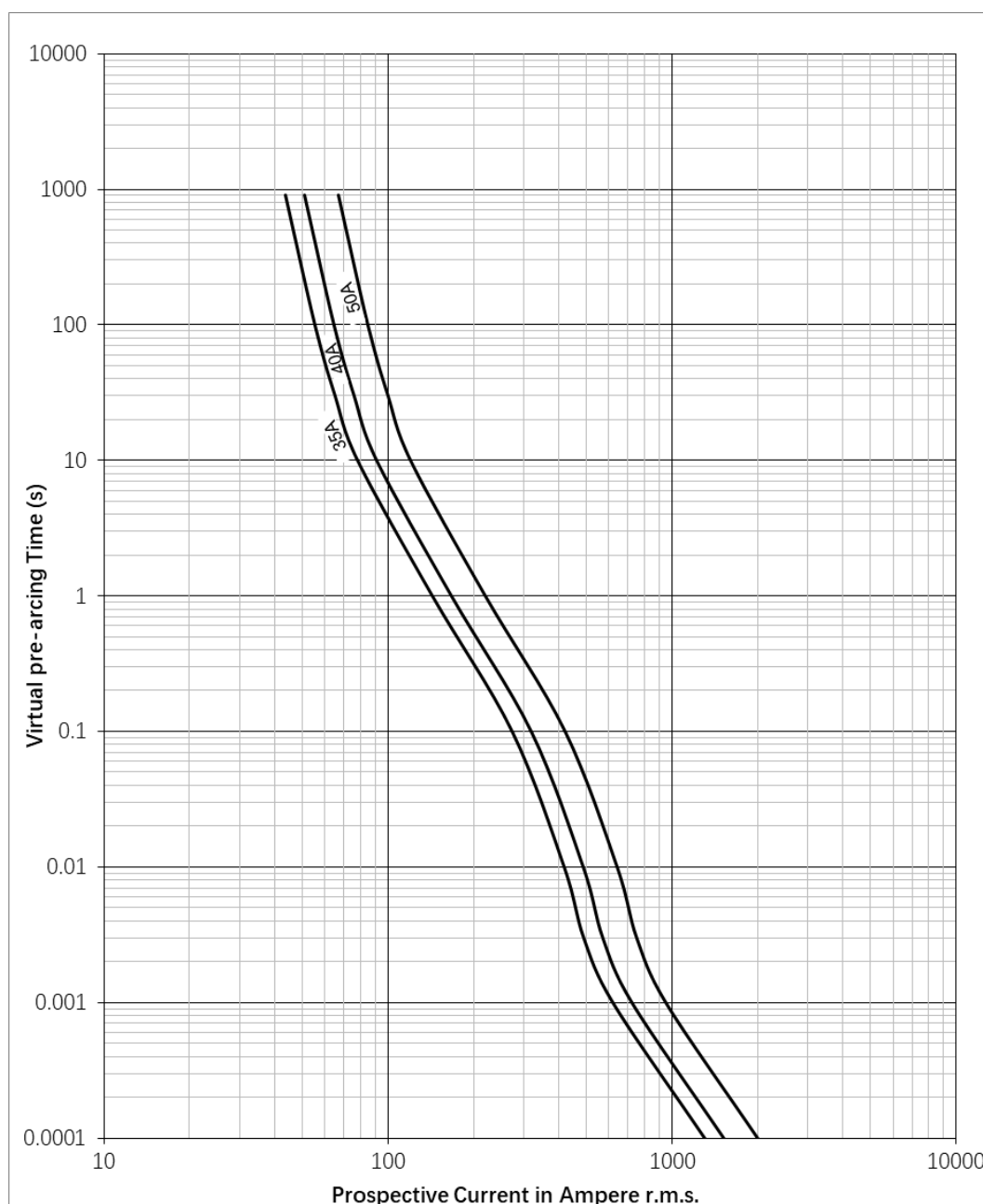
Electric vehicle power fuses — EVK14-xxx-T (1000 Vdc, 35-50A)

Technical parameter:



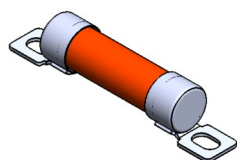
Voltage Rating (V)	Current Rating I_n (A)	Pre-arcing I^2t (A ² s)	Total I^2t (A ² s)	Power dissipation at 0.5 I_n (W)
1000Vdc	35	620	2,800	1.6
	40	870	3,900	1.8
	50	1,500	6,700	2.1

T-C curve



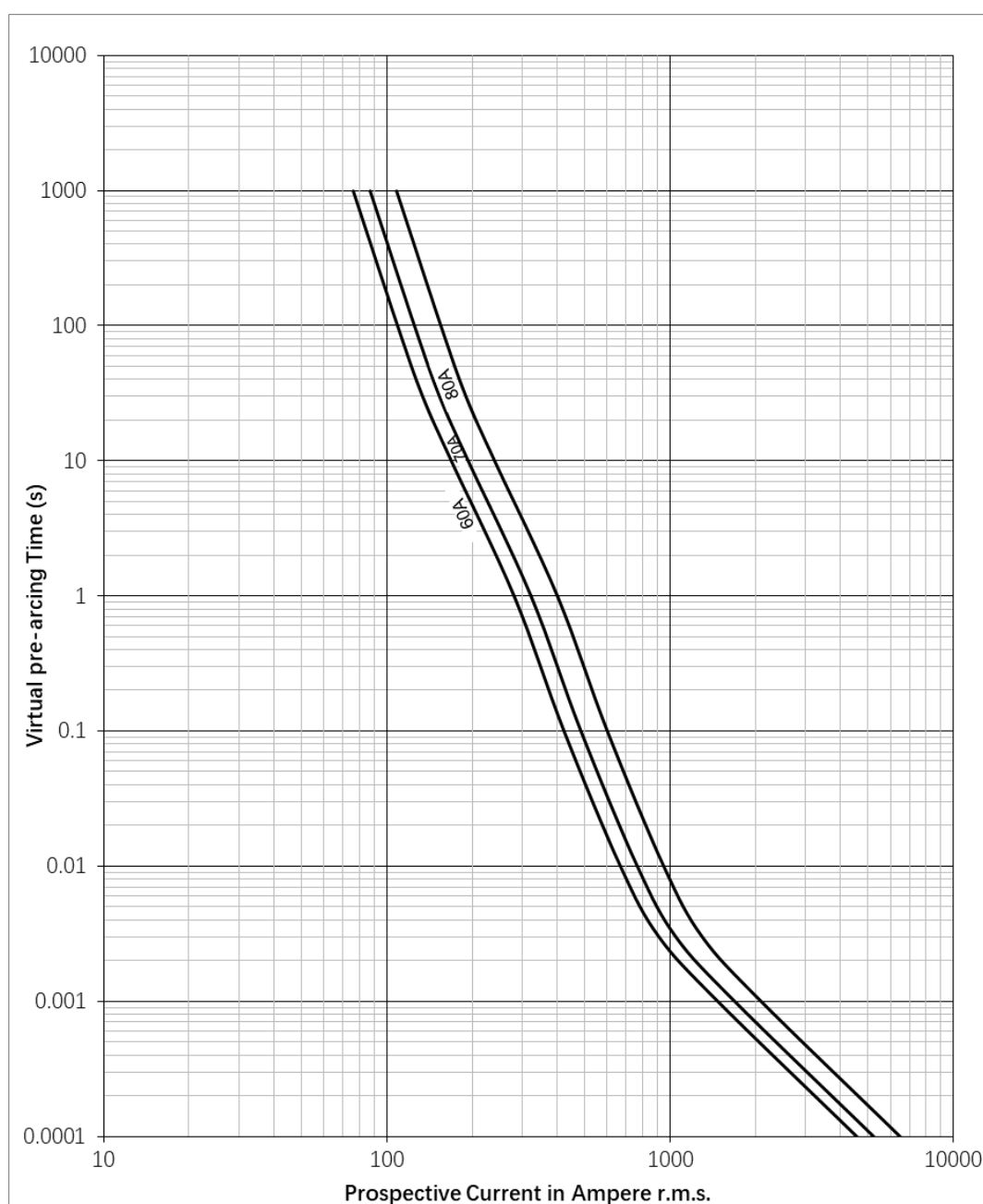
Electric vehicle power fuses — EVK22-xxx-T (1000 Vdc, 60-80A)

Technical parameter:



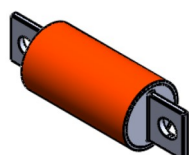
Voltage Rating (V)	Current Rating I_n (A)	Pre-arcing I^2t (A ² s)	Total I^2t (A ² s)	Power dissipation at 0.5 I_n (W)
1000Vdc	60	3,000	9,600	4
	70	4,000	12,700	4
	80	6,000	19,400	5

T-C curve



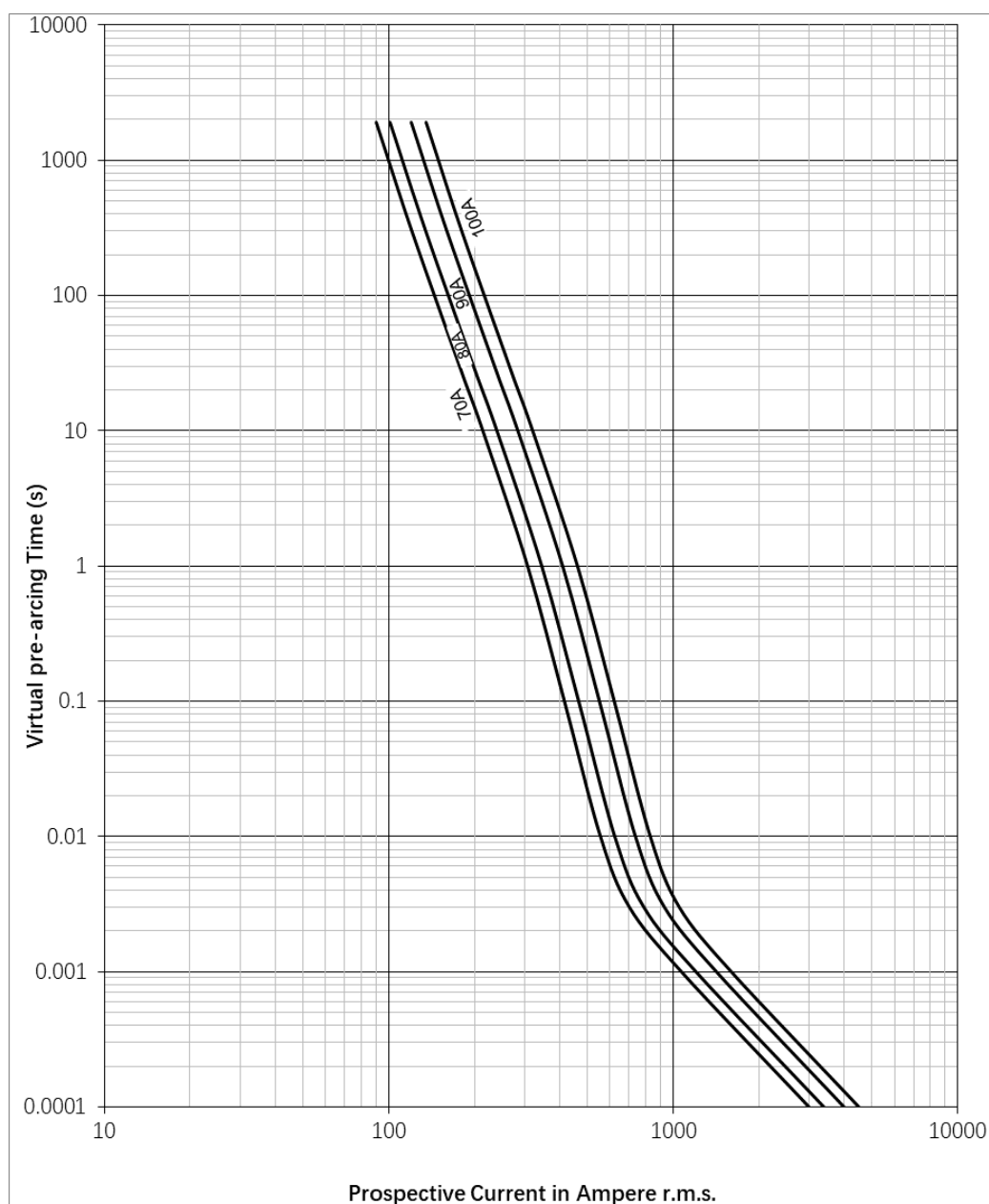
Electric vehicle power fuses — EVK25-xxx (1000 Vdc, 70-100A)

Technical parameter:



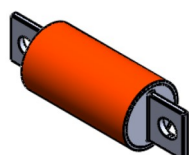
Voltage Rating (V)	Current Rating I_n (A)	Pre-arcing I^2t (A ² s)	Total I^2t (A ² s)	Power dissipation at 0.5 I_n (W)
1000Vdc	70	1,100	4,100	5
	80	1,400	4,900	6
	90	1,900	6,500	6
	100	2,400	8,300	7

T-C curve



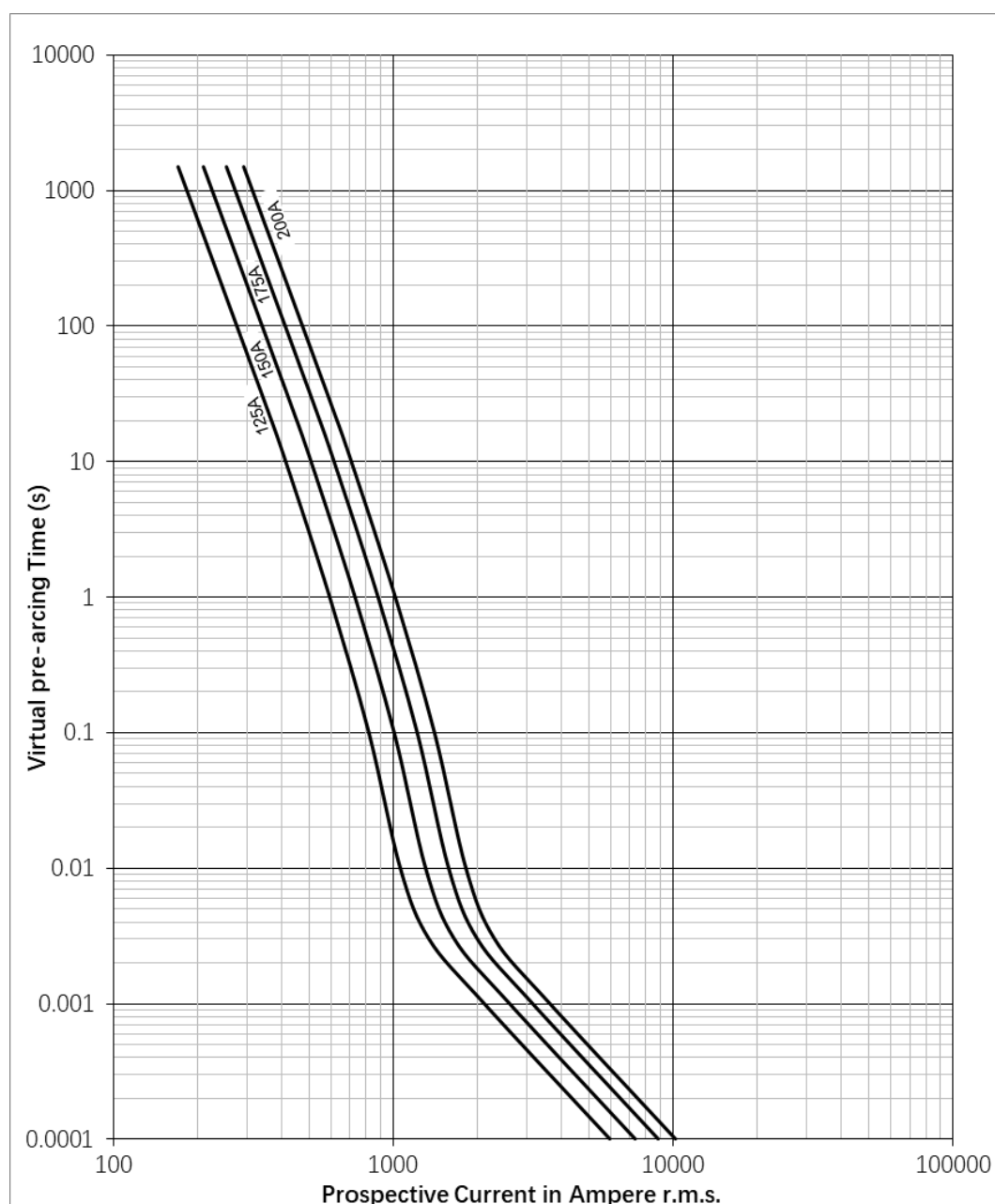
Electric vehicle power fuses — EVK30-xxx (1000 Vdc, 125-200A)

Technical parameter:



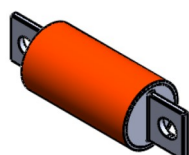
Voltage Rating (V)	Current Rating I_n (A)	Pre-arcing I^2t (A ² s)	Total I^2t (A ² s)	Power dissipation at 0.5 I_n (W)
1000Vdc	125	4,900	19,000	7
	150	7,400	27,000	9
	175	10,800	37,000	10
	200	14,500	49,000	12

T-C curve



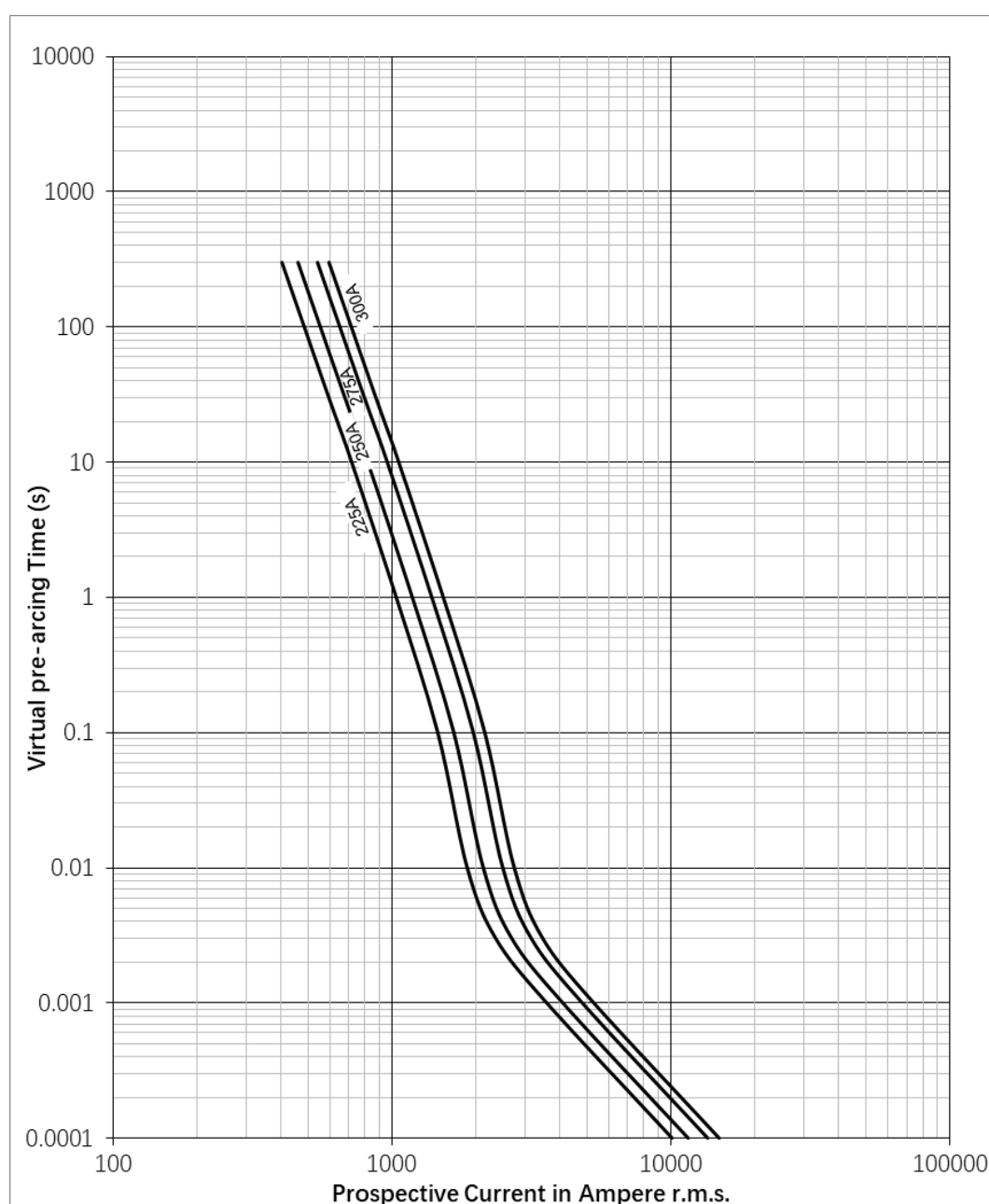
Electric vehicle power fuses — EVK40-xxx (1000 Vdc, 225-300A)

Technical parameter:



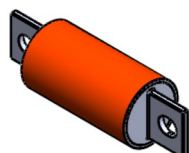
Voltage Rating (V)	Current Rating I_n (A)	Pre-arcing I^2t (A ² s)	Total I^2t (A ² s)	Power dissipation at 0.5 I_n (W)
1000Vdc	225	15,000	52,000	13
	250	20,000	62,000	15
	275	27,000	81,000	16
	300	33,000	91,000	17

T-C curve



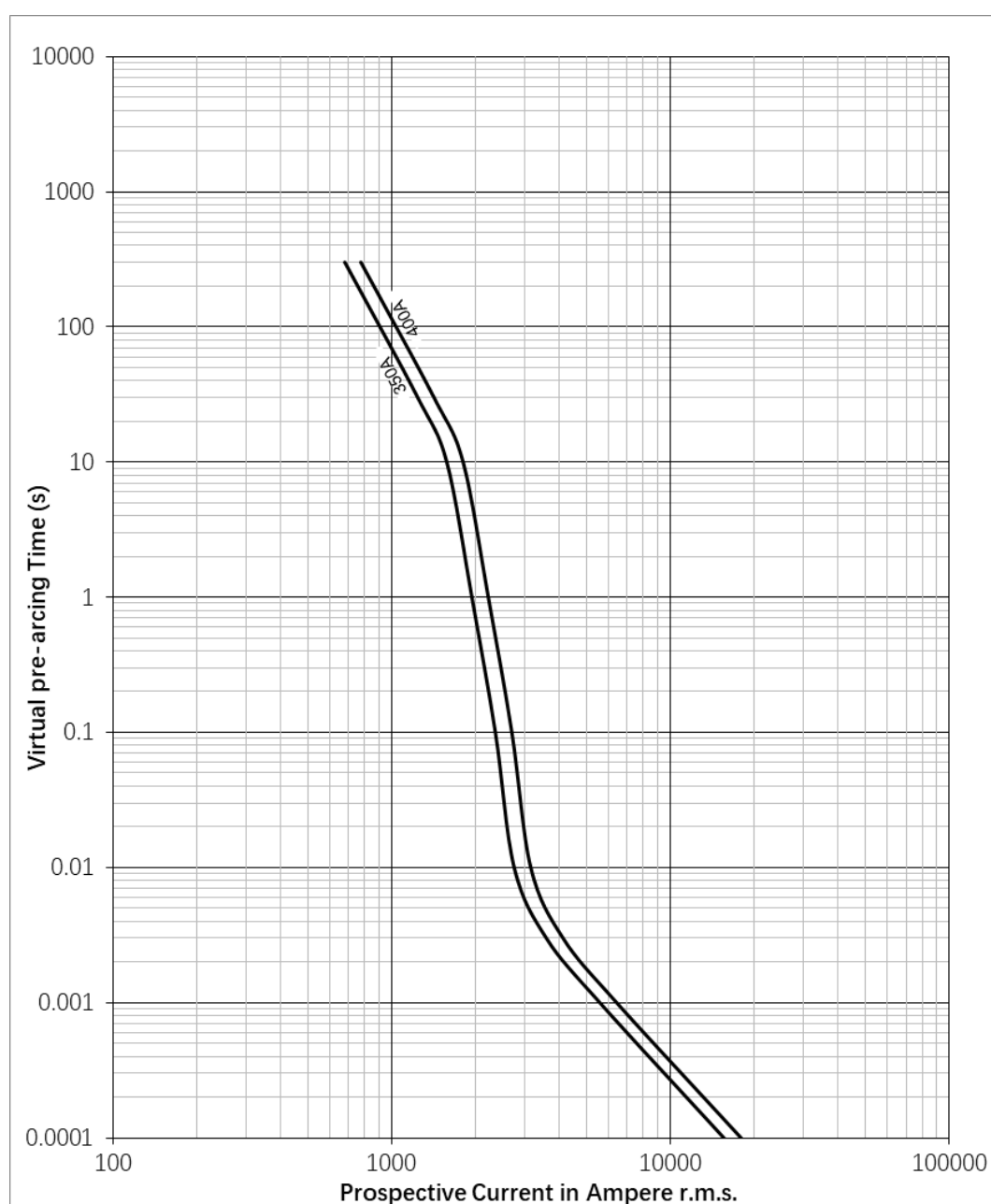
Electric vehicle power fuses — EVK50-xxx (1000 Vdc, 350-400A)

Technical parameter:



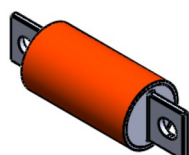
Voltage Rating (V)	Current Rating I_n (A)	Pre-arcing I^2t (A ² s)	Total I^2t (A ² s)	Power dissipation at 0.5 I_n (W)
1000Vdc	350	19,000	69,000	22
	400	29,000	97,000	24

T-C curve



Electric vehicle power fuses — EVK60-xxx (1000 Vdc, 450-600A)

Technical parameter:



Voltage Rating (V)	Current Rating I_n (A)	Pre-arcing I^2t (A ² s)	Total I^2t (A ² s)	Power dissipation at 0.5 I_n (W)
1000Vdc	450	33,000	104,000	28
	500	40,000	120,000	32
	550	53,000	149,000	34
	600	68,000	177,000	36

T-C curve

