

EVpack-fuse MEV50

500 VDC Max., L/R less than or equal 2.5ms, 60 - 800A

BATTERY FUSES

BATTERY PACK FUSES



EVpack-fuse line-up belongs to the new DC Over-Current protection (O.C.P.) range developed by MERSEN to address specific needs in EV/HEV and Battery Electrical Storage System.

EVpack-fuse provides the ultimate protection of the battery pack offering reliable clearing of DC fault currents.

It has been specifically engineered and tested to provide DC applications best-in-class protection performance: Up to 500VDC, Current rating (I_n) = 60 to 800A, Interrupting Rating (IR) = 30kA, L/R ≤ 2.5 ms, Minimum Breaking Capacity (MBC) < 2kA for a perfect matching with DC contactor.

TECHNICAL DATA OVERVIEW

Voltage DC	500 VDC
Ampere Range (A)	60 ... 800 A
Speed/Characteristic	aR

FEATURES & BENEFITS

- Design for DC applications
- Low watt losses
- High cycling performance
- Full coverage of battery module voltage and current
- Ultra compact size
- Current Ratings (I_n): 60 to 800A
- Interrupting Rating (IR): 30kA @ 500VDC, L/R ≤ 2.5 ms

APPLICATIONS

- EV/HEV
- Electrical Energy Storage
- Battery pack protection
- Battery Disconnect Unit (BDU)
- Battery Junction Box for auxiliaries
- Battery charger
- Supercapacitor pack protection
- Backup protection for DC relay / disconnect / switch
- Maintenance Safety Disconnect (MSD)

STANDARDS

- IEC 60 269-4
- ISO 8820-8
- JASO D622



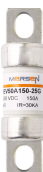
PRODUCT RANGE



MEV50A150-20G

MEV50A Size 20

Catalog number	Rated voltage DC (IEC)	Rated voltage DC (UL)	Rated current I_n	Pre-arcing I^2t	Clearing I^2t at Rated Voltage	Power dissipation at 0.5 I_n	Min. breaking capacity (MBC)	Max. time to clear MBC	Package	Weight
MEV50A60-20G	500 V	500 V	60 A	230 A ² s	2000 A ² s	1.7 W	120 A	6 s	30	41 g
MEV50A70-20G	500 V	500 V	70 A	390 A ² s	3400 A ² s	2.2 W	140 A	20 s	30	41 g
MEV50A80-20G	500 V	500 V	80 A	510 A ² s	4400 A ² s	2.4 W	160 A	26 s	30	41 g
MEV50A100-20G	500 V	500 V	100 A	910 A ² s	7800 A ² s	3.6 W	200 A	33 s	30	41 g
MEV50A125-20G	500 V	500 V	125 A	1420 A ² s	12500 A ² s	3.9 W	250 A	36 s	30	41 g
MEV50A150-20G	500 V	500 V	150 A	2050 A ² s	17500 A ² s	4.8 W	300 A	39 s	30	41 g



MEV50A150-25G

MEV50A Size 25

Catalog number	Rated voltage DC (IEC)	Rated voltage DC (UL)	Rated current I_n	Pre-arcing I^2t	Clearing I^2t at Rated Voltage	Power dissipation at 0.5 I_n	Min. breaking capacity (MBC)	Max. time to clear MBC	Package	Weight
MEV50A100-25G	500 V	500 V	100 A	1420 A ² s	12500 A ² s	2.4 W	500 A	0.5 s	12	75 g
MEV50A125-25G	500 V	500 V	125 A	2790 A ² s	24000 A ² s	2.9 W	625 A	0.5 s	12	75 g
MEV50A150-25G	500 V	500 V	150 A	4610 A ² s	51000 A ² s	3.1 W	750 A	0.5 s	12	75 g
MEV50A175-25G	500 V	500 V	175 A	6470 A ² s	60500 A ² s	3.7 W	875 A	0.5 s	12	75 g
MEV50A200-25G	500 V	500 V	200 A	8190 A ² s	70000 A ² s	4.3 W	1000 A	0.5 s	12	75 g
MEV50A250-25G	500 V	500 V	250 A	12800 A ² s	110000 A ² s	6.3 W	1250 A	0.5 s	12	75 g



MEV50A400-30G

MEV50A Size 30

Catalog number	Rated voltage DC (IEC)	Rated voltage DC (UL)	Rated current I_n	Pre-arcing I^2t	Clearing I^2t at Rated Voltage	Power dissipation at 0.5 I_n	Min. breaking capacity (MBC)	Max. time to clear MBC	Package	Weight
MEV50A150-30G	500 V	500 V	150 A	4610 A ² s	36500 A ² s	3.5 W	750 A	0.5 s	12	0.1 kg
MEV50A200-30G	500 V	500 V	200 A	8190 A ² s	65000 A ² s	4.7 W	1000 A	0.5 s	12	0.1 kg
MEV50A250-30G	500 V	500 V	250 A	12800 A ² s	105000 A ² s	6.2 W	1250 A	0.5 s	12	0.1 kg
MEV50A300-30G	500 V	500 V	300 A	18440 A ² s	146000 A ² s	7.5 W	1500 A	0.5 s	12	0.1 kg
MEV50A350-30G	500 V	500 V	350 A	25900 A ² s	205000 A ² s	8.8 W	1750 A	0.5 s	12	0.1 kg
MEV50A400-30G	500 V	500 V	400 A	32780 A ² s	260000 A ² s	10.9 W	2000 A	0.5 s	12	0.1 kg



MEV50A600-38G

MEV50A Size 38

Catalog number	Rated voltage DC (IEC)	Rated voltage DC (UL)	Rated current I_n	Pre-arcing I^2t	Clearing I^2t at Rated Voltage	Power dissipation at 0.5 I_n	Min. breaking capacity (MBC)	Max. time to clear MBC	Package	Weight
MEV50A300-38G	500 V	500 V	300 A	18440 A ² s	143000 A ² s	7.3 W	1500 A	0.5 s	8	0.17 kg
MEV50A350-38G	500 V	500 V	350 A	25900 A ² s	190000 A ² s	8.7 W	1750 A	0.5 s	8	0.17 kg
MEV50A400-38G	500 V	500 V	400 A	32780 A ² s	255000 A ² s	10.6 W	2000 A	0.5 s	8	0.17 kg
MEV50A450-38G	500 V	500 V	450 A	40470 A ² s	310000 A ² s	12.7 W	2000 A	0.5 s	8	0.17 kg
MEV50A500-38G	500 V	500 V	500 A	51210 A ² s	400000 A ² s	14.1 W	2000 A	1 s	8	0.17 kg
MEV50A600-38G	500 V	500 V	600 A	73750 A ² s	565000 A ² s	17.6 W	2000 A	3.3 s	8	0.17 kg

Power loss data is collected using IEC 60 269-1 standard conductor size and may differ from real world application

EVpack-fuse

MEV50

500 VDC Max., L/R less than or equal 2.5ms, 60 - 800A

PRODUCT RANGE



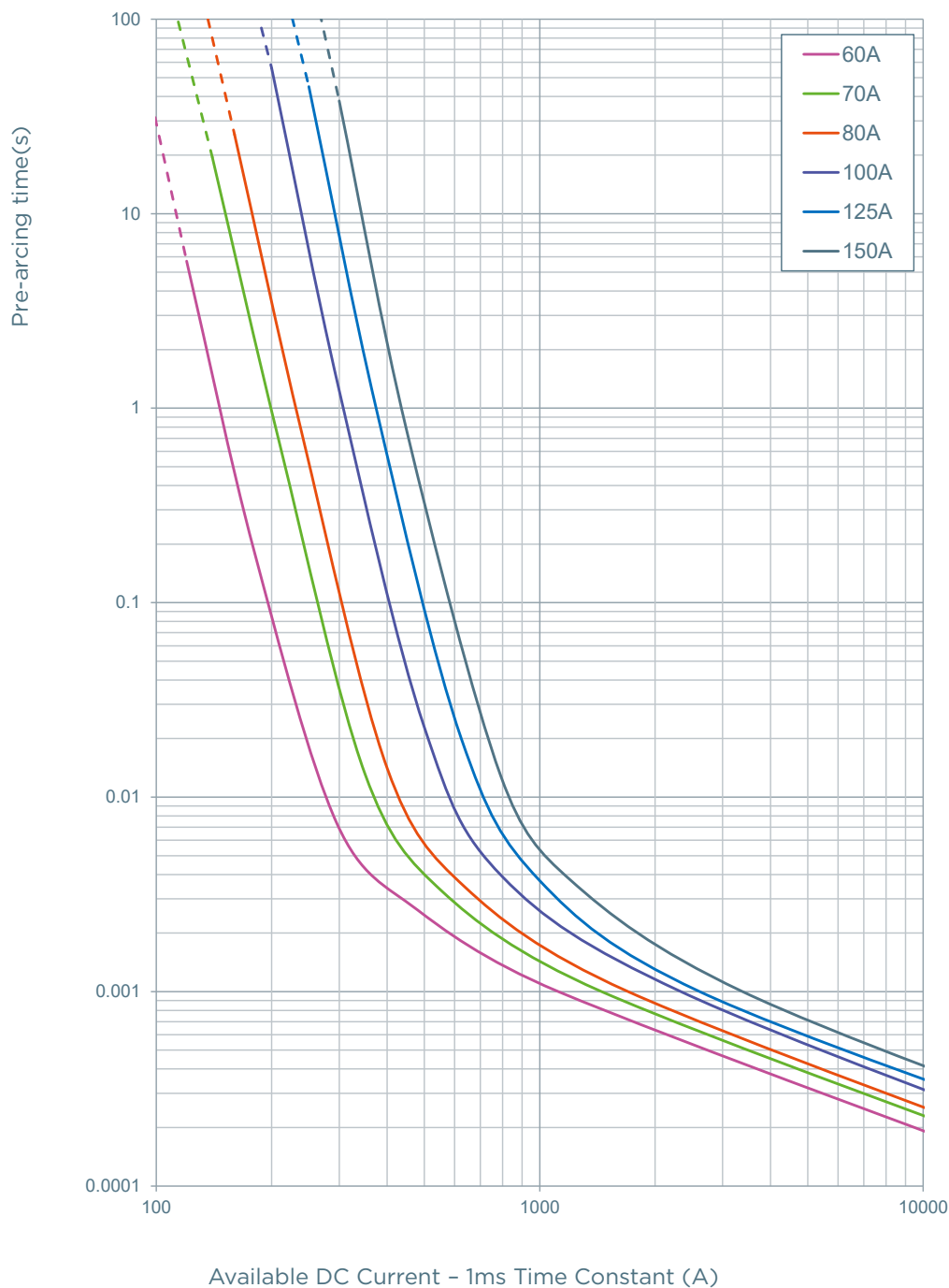
MEV50A600-45G

MEV50A Size 45

Catalog number	Rated voltage DC (IEC)	Rated voltage DC (UL)	Rated current I _n	Pre-arcing I ² t	Clearing I ² t at Rated Voltage	Power dissipation at 0.5 I _n	Min. breaking capacity (MBC)	Max. time to clear MBC	Package	Weight
MEV50A400-45G	500 V	500 V	400 A	32780 A²s	255000 A²s	10.7 W	2000 A	0.5 s	4	0.24 kg
MEV50A450-45G	500 V	500 V	450 A	40470 A²s	310000 A²s	12.9 W	2000 A	0.5 s	4	0.24 kg
MEV50A500-45G	500 V	500 V	500 A	51210 A²s	400000 A²s	14.4 W	2000 A	1 s	4	0.24 kg
MEV50A550-45G	500 V	500 V	550 A	61970 A²s	475000 A²s	16.6 W	2000 A	1.5 s	4	0.24 kg
MEV50A600-45G	500 V	500 V	600 A	73750 A²s	565000 A²s	18.2 W	2000 A	3.5 s	4	0.24 kg
MEV50A700-45GMT	500 V	500 V	700 A	68050 A²s	651000 A²s	19.9 W	2500 A	6 s	4	0.27 kg
MEV50A800-45GMT	500 V	500 V	800 A	88890 A²s	850000 A²s	21.6 W	2500 A	16.5 s	4	0.27 kg

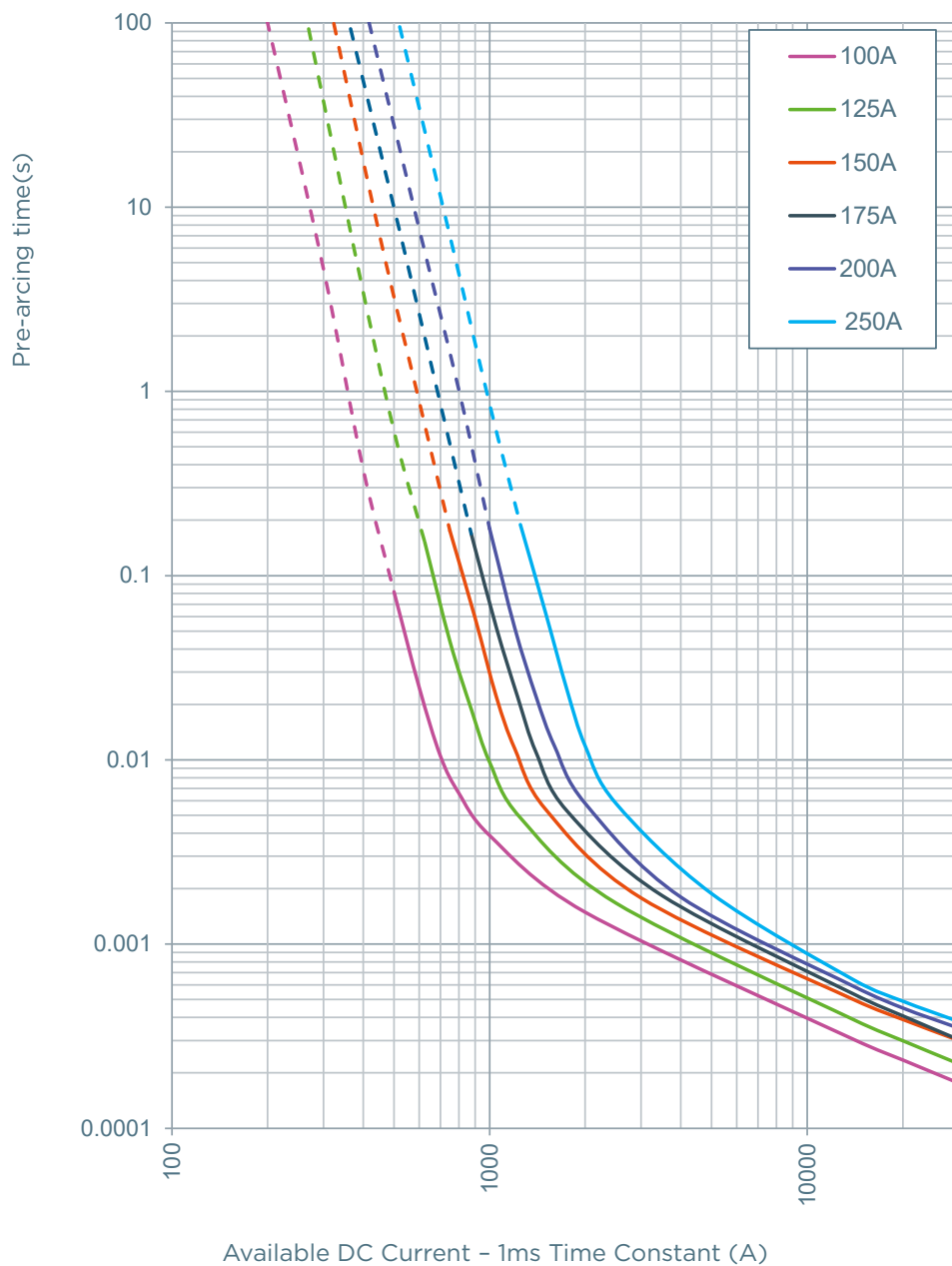
TIME CURRENT CHARACTERISTIC CURVES

MEV50A-20G (60A to 150A)



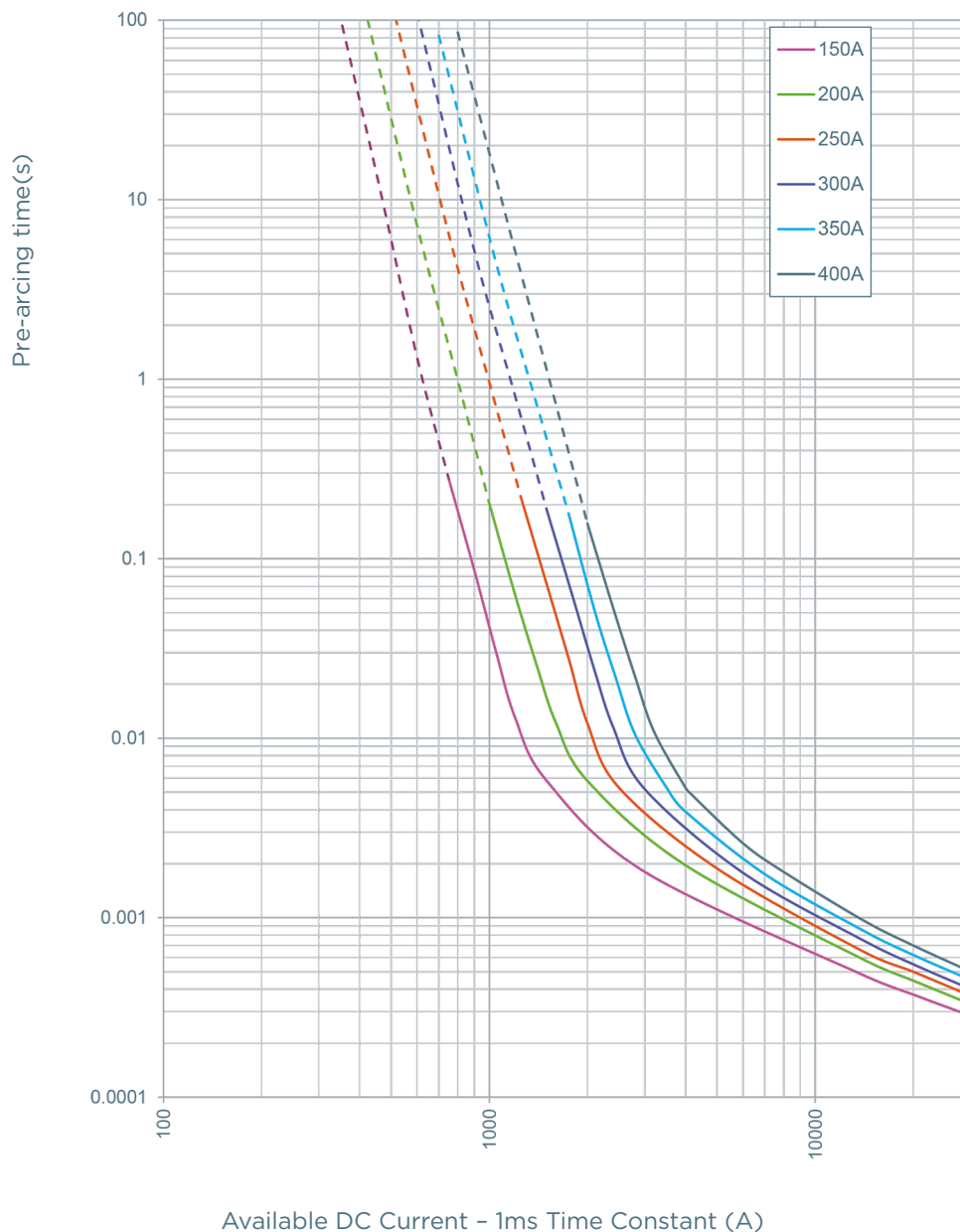
TIME CURRENT CHARACTERISTIC CURVES

MEV50A-25G (100A to 250A)



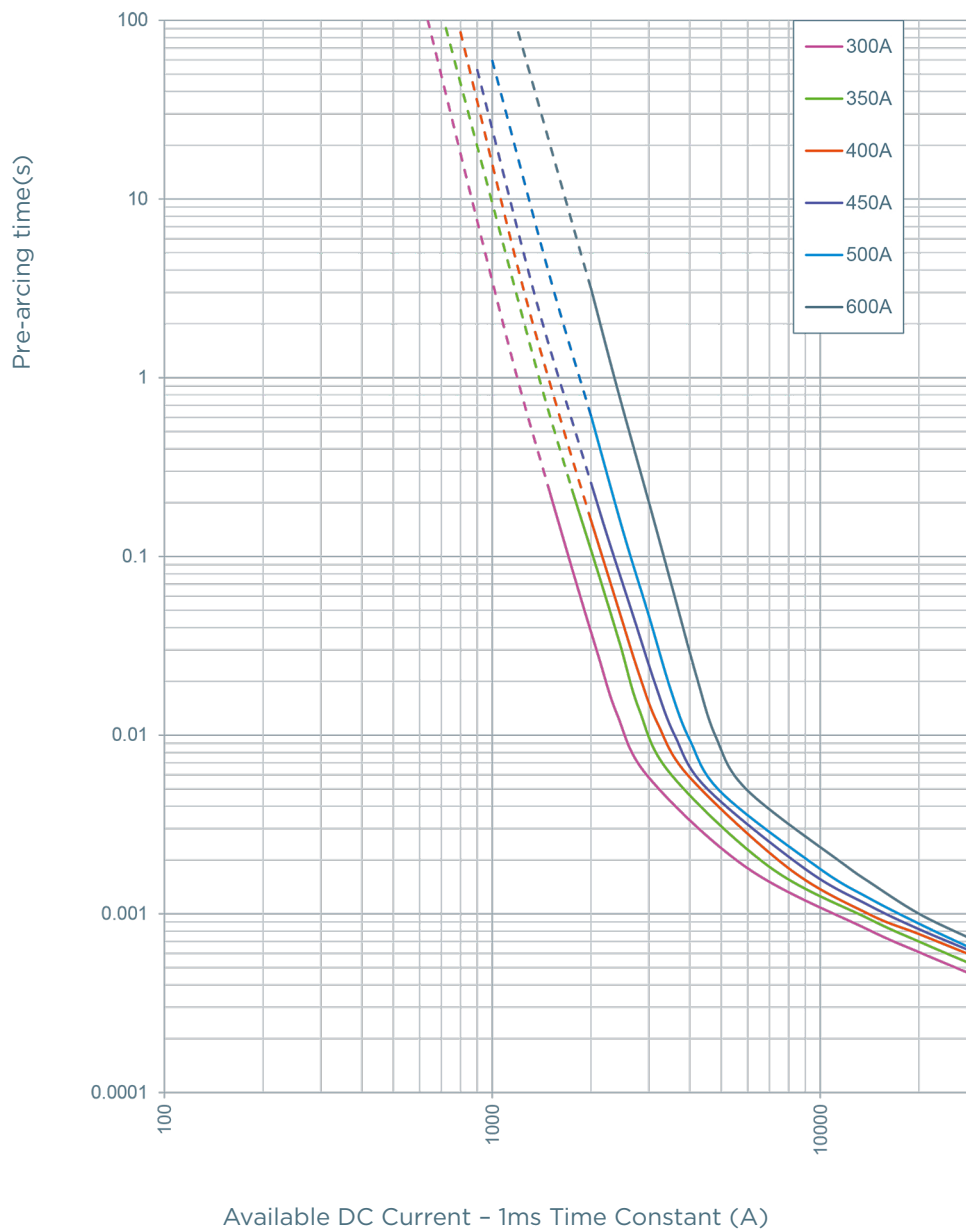
TIME CURRENT CHARACTERISTIC CURVES

MEV50A-30G (150A to 400A)



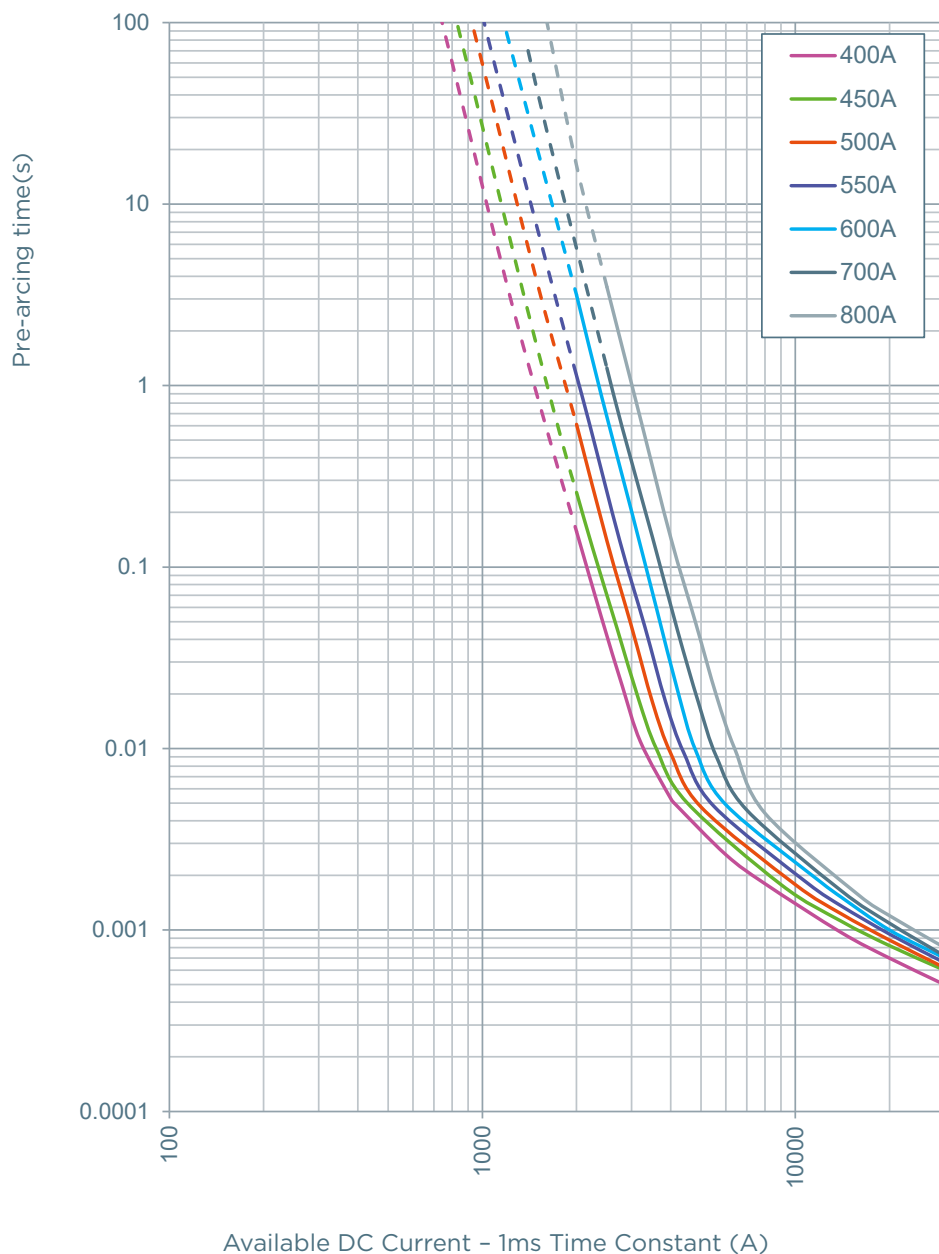
TIME CURRENT CHARACTERISTIC CURVES

MEV50A-38G (300A to 600A)



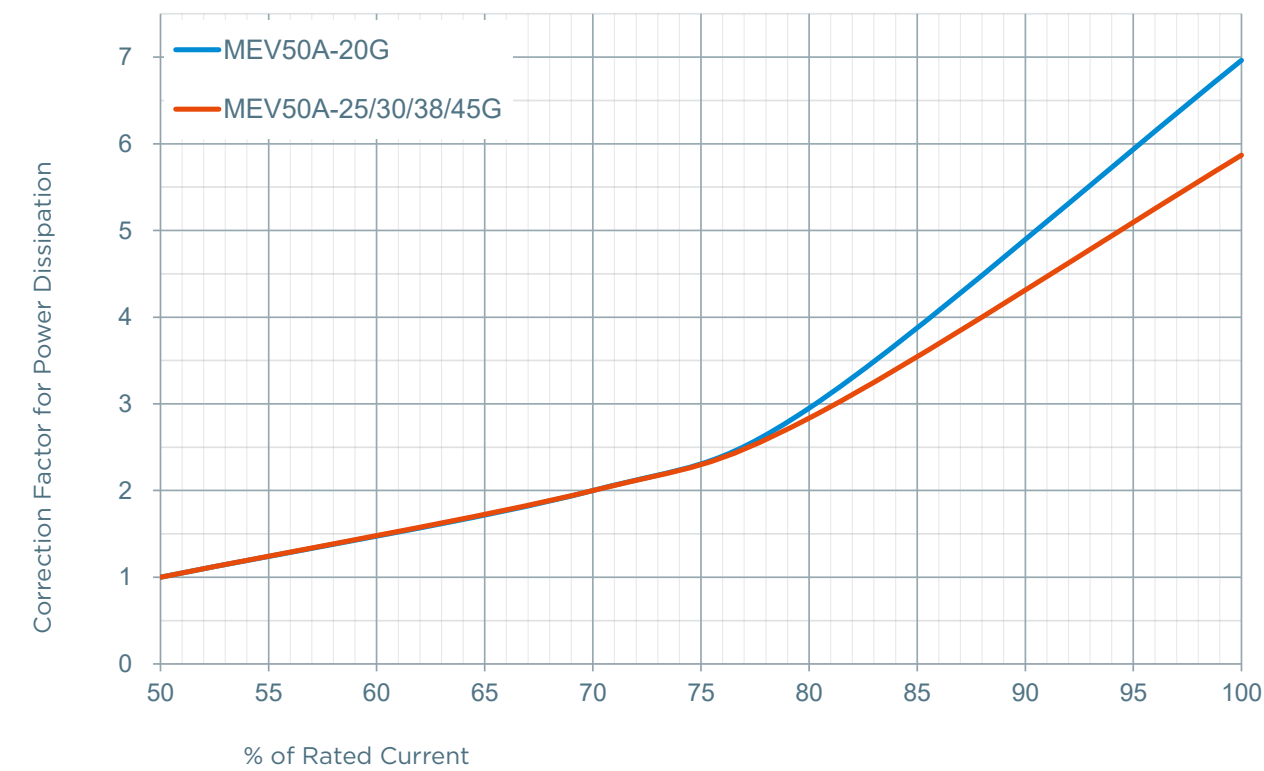
TIME CURRENT CHARACTERISTIC CURVES

MEV50A-45G (400A to 800A)



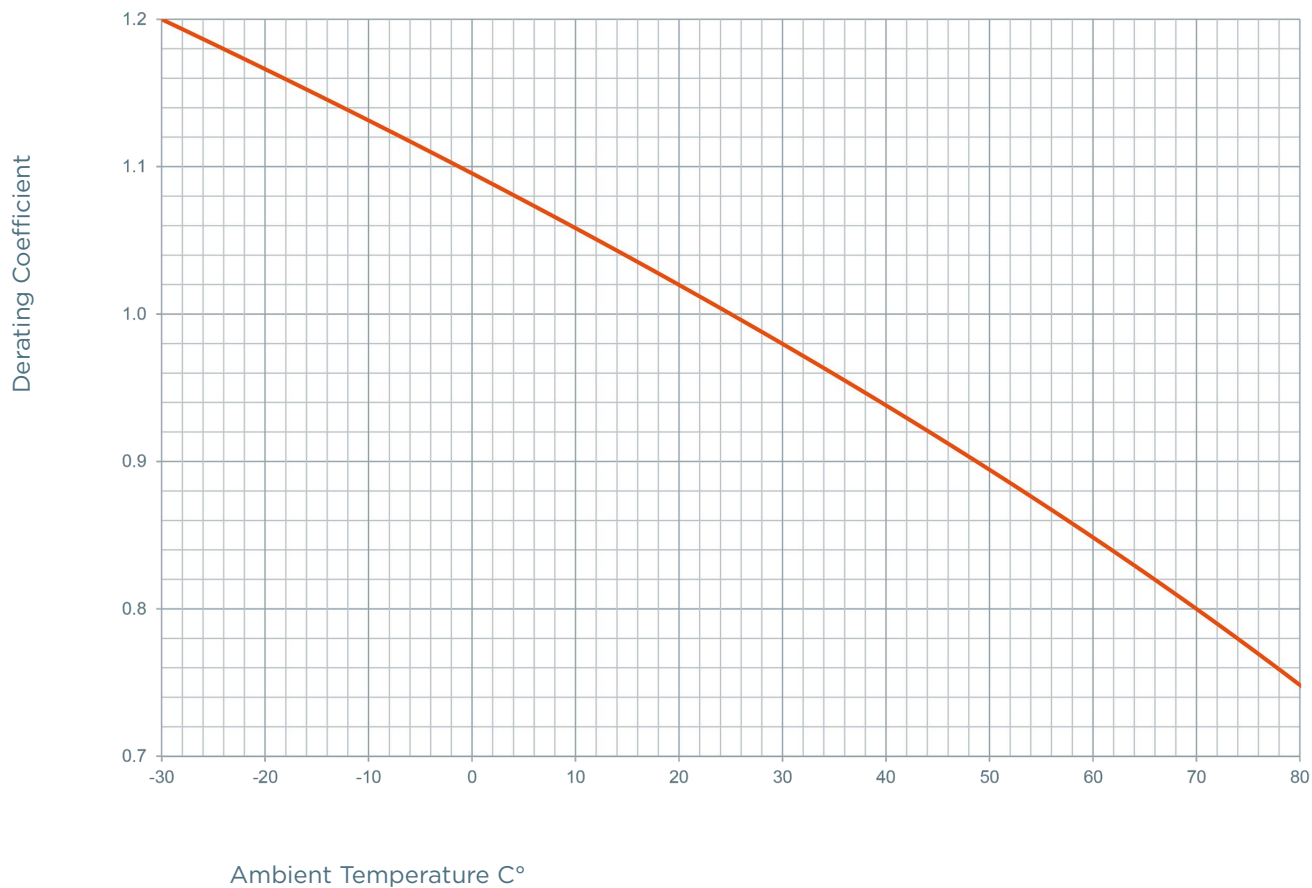
POWER DISSIPATION

MEV50A



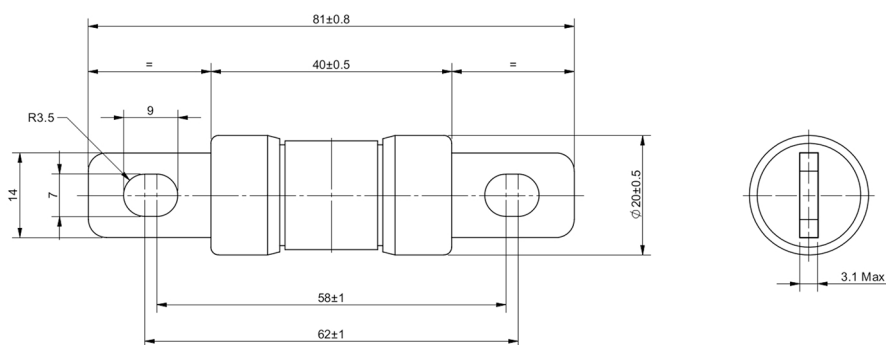
TEMPERATURE DERATING

MEV50A



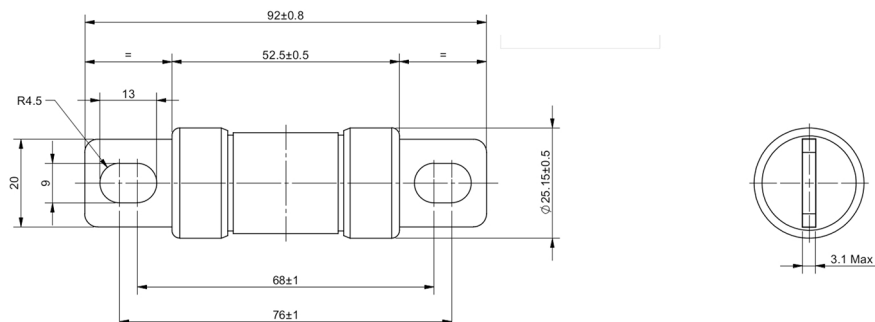
DIMENSIONS

MEV50A-20G

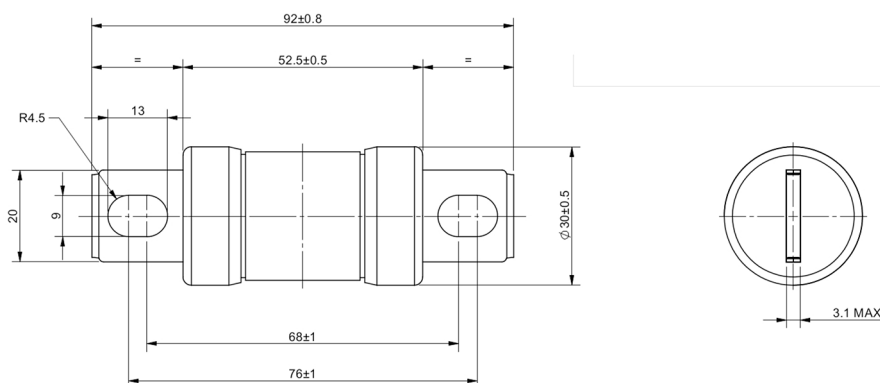


DIMENSIONS

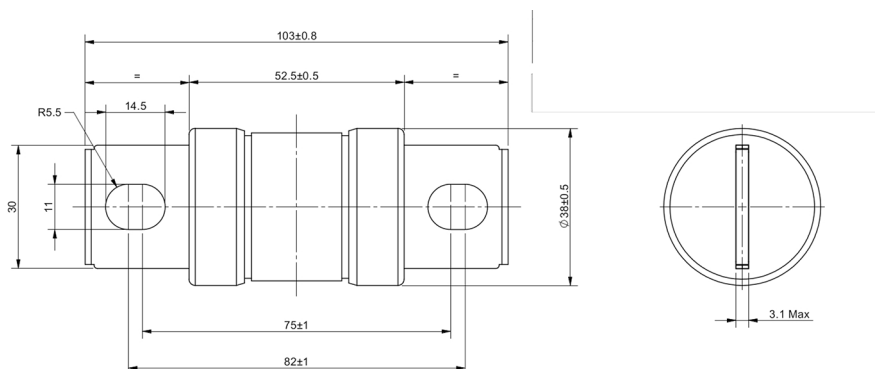
MEV50A-25G



MEV50A-30G

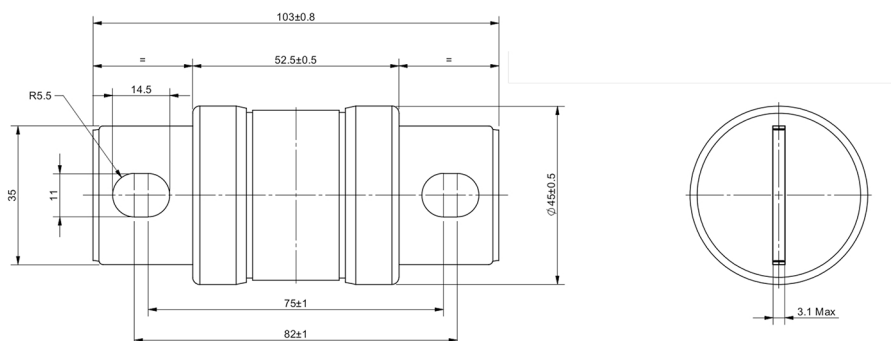


MEV50A-38G

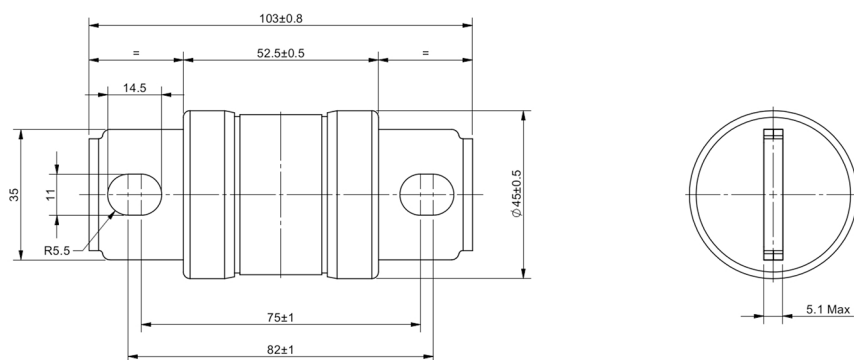


DIMENSIONS

MEV50A-45G



MEV50A-45GMT



Recommended Mounting Torque and Bolt Size

Fuse size	Mounting Torque	Bolt Size
$\phi 20$ mm	6 N m	M6
$\phi 25$ mm	15 N m	M8
$\phi 30$ mm	15 N m	M8
$\phi 38$ mm	20 N m	M10
$\phi 45$ mm	20 N m	M10