Rectifier Diode Modules
AMKE 600

V_{RSM} V	V_{RRM}, V_{DRM} V	I_{FRMS} = 930 A (maximum value for continuous operation) I_{FAV} = 600 A (sin. 180; T_C = 100°C)		
1200 1600 2000 2200	1200 1600 2000 2200	AMKE 600-12 AMKE 600-16 AMKE 600-20 H4 AMKE 600-22 H4		

Symbols and parameters			Values	Units
I_{FAV}	Mean forward current	sin 180; T_C = 100°C	600	A
I_{FSM}	Surge forward current	T_{vj} = 25°C; 10 ms T_{vj} = 150°C; 10 ms	22000 18000	A A
i^2t	I^2t value, rating for fusing	T_{vj} = 25°C; 8.3…10 ms T_{vj} = 150°C; 8.3…10 ms	2420000 1805000	A^2s A^2s
V_F	Forward voltage	T_{vj} = 25°C; I_F = 3000 A	max. 1.5	V
$V_{(TO)}$	On-state threshold voltage	T_{vj} = 150°C	max. 0.75	V
r_T	On-state slope resistance	T_{vj} = 150°C	max. 0.25	mΩ
I_{RD}	Direct reverse current	T_{vj} = 150°C; V_{RD} = V_{RRM}	max. 15	mA
$R_{th(j-c)}$	Thermal resistance, junction to case	cont.; per diode = per module sin.180; per diode = per module	0.07 0.075	K/W K/W
$R_{th(c-s)}$	Thermal resistance, junction to heatsink	per diode = per module	0.02	K/W
T_{vj}	(Virtual) junction temperature		-40 … +150	°C
T_{stg}	Storage temperature range		-40 … +130	°C
V_{isol}	Insulation test voltage (r.m.s.)	a.c. 50 Hz; r.m.s.; 1s / 1min. a.c. 50 Hz; r.m.s.; 1s / 1min. for AMKE…H4	3600 / 3000 4800 / 4000	V~ V~
M_S	Mounting torque on heatsink		5 ± 15%	Nm
M_t	Mounting torque for terminals		17± 15%	Nm
a	Maximum allowable acceleration		5*9.81	m/s^2
W	Weight		840	g

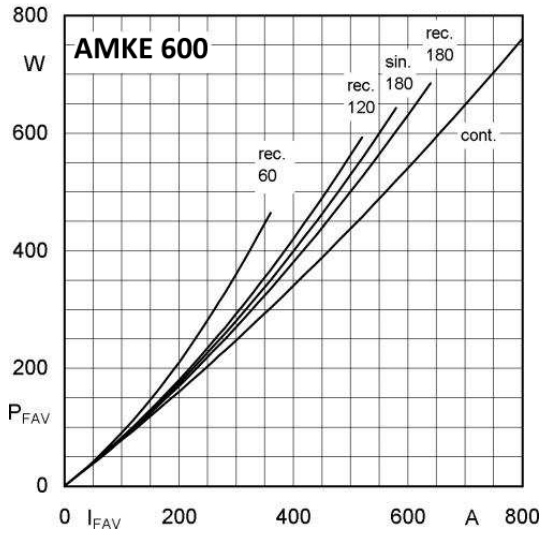


Fig. 11L Power dissipation per diode vs. forward current

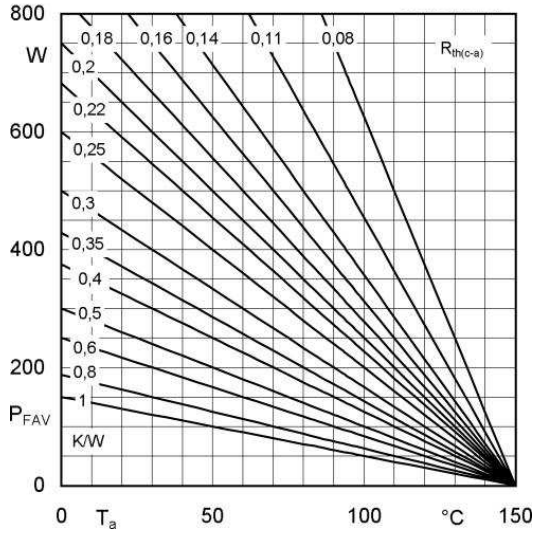


Fig. 11R Power dissipation per diode vs. ambient temperature

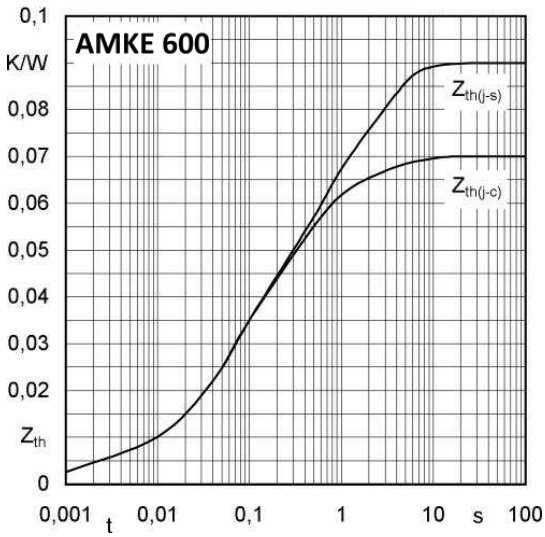


Fig. 14 Transient thermal impedance vs. time

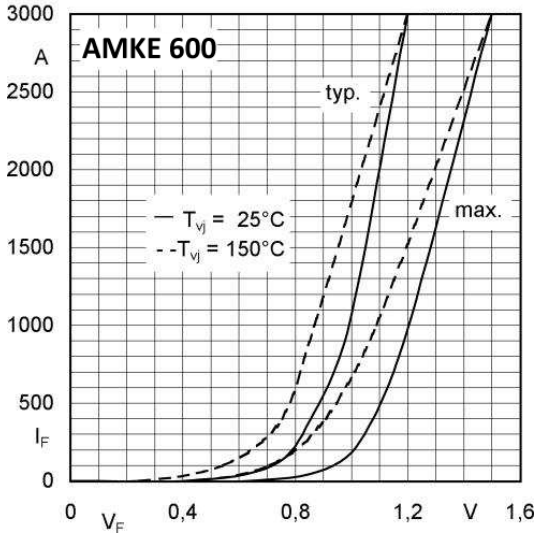


Fig. 15 Forward characteristics

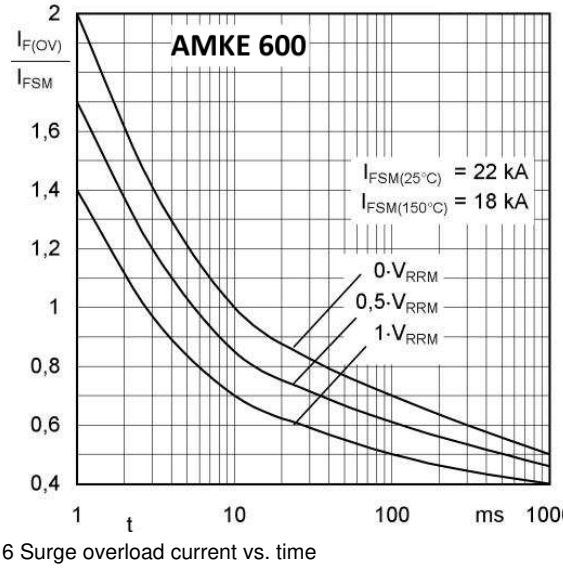
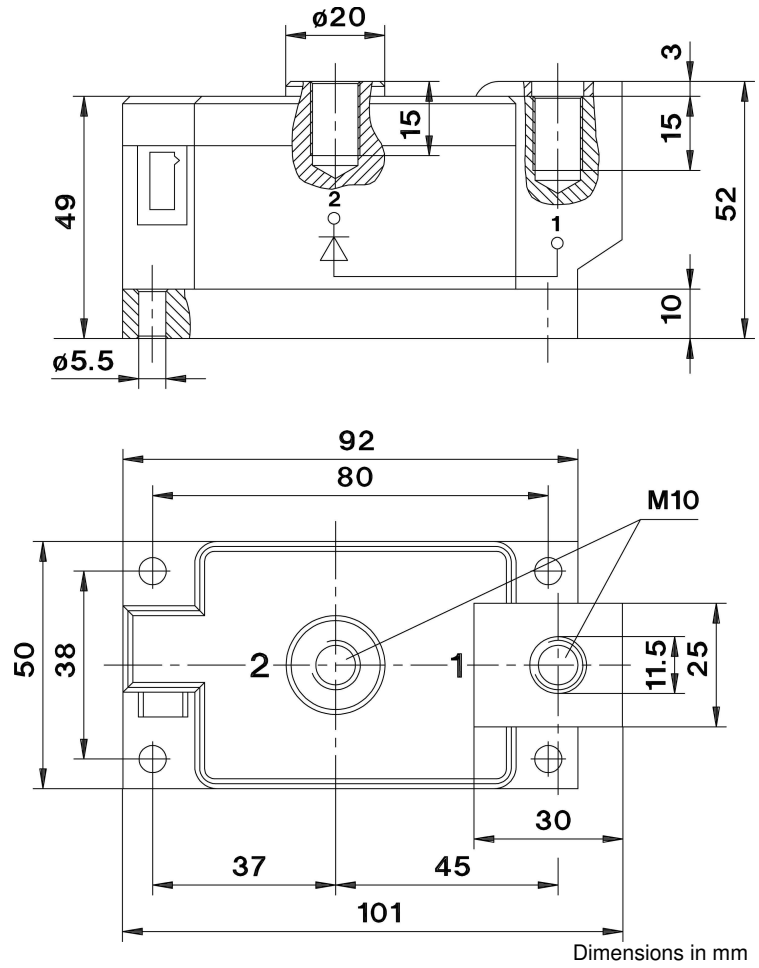


Fig. 16 Surge overload current vs. time

DIMENSIONS



TOPOLOGY OF INTERNAL CONNECTION