



Rectifier Diode Modules

AMKE 162



V_{RSM} V	V_{RRM} V	$I_{FRMS} = 310 \text{ A}$ (maximum value for continuous operation) $I_{FAV} = 160 \text{ A}$ (sin. 180; $T_c = 95^\circ\text{C}$)		
900	800	AMKE 162-08		
1300	1200	AMKE 162-12		
1500	1400	AMKE 162-14		
1700	1600	AMKE 162-16		
1900	1800	AMKE 162-18		
2100	2000			
2300	2200	AMKE 162-22 H4		

Symbols and parameters			Values	Units
I_{FAV}	Mean forward current	sin 180; $T_c = 85$ (100)°C	195 (150)	A
I_D	Direct output current	P3/180; $T_a = 45^\circ\text{C}$; B2/B6 P3/180F; $T_a = 35^\circ\text{C}$; B2/B6	90 / 115 210 / 260	A
I_{FSM}	Surge forward current	$T_{vj} = 25^\circ\text{C}$; 10 ms $T_{vj} = 125^\circ\text{C}$; 10 ms	6000 5000	A
i^2t	i^2t value, rating for fusing	$T_{vj} = 25^\circ\text{C}$; 8.3...10 ms $T_{vj} = 125^\circ\text{C}$; 8.3...10 ms	180000 125000	A^2s A^2s
V_F	Forward voltage	$T_{vj} = 25^\circ\text{C}$; $I_F = 500 \text{ A}$	max. 1.5	V
$V_{(TO)}$	On-state threshold voltage	$T_{vj} = 135^\circ\text{C}$	max. 0.85	V
r_T	On-state slope resistance	$T_{vj} = 135^\circ\text{C}$	max. 1.2	$\text{m}\Omega$
I_{RD}	Direct reverse current	$T_{vj} = 135^\circ\text{C}$; $V_{RD} = V_{RRM}$	max. 9	mA
$R_{th(j-c)}$	Thermal resistance, junction to case	per diode / per module	0.18 / 0.09	K/W
$R_{th(c-s)}$	Thermal resistance, junction to heatsink	per diode / per module	0.1 / 0.05	K/W
T_{vj}	(Virtual) junction temperature		-40 ... +135	°C
T_{stg}	Storage temperature range		-40 ... +135	°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 AMK ... H4	3600 / 3000 4800 / 4000	V^\sim V^\sim
M_s	Mounting torque on heatsink		$5 \pm 15\%$	Nm
M_t	Mounting torque for terminals		$5 \pm 15\%$	Nm
a	Maximum allowable acceleration		$5 * 9.81$	m/s^2
W	Weight		165	g

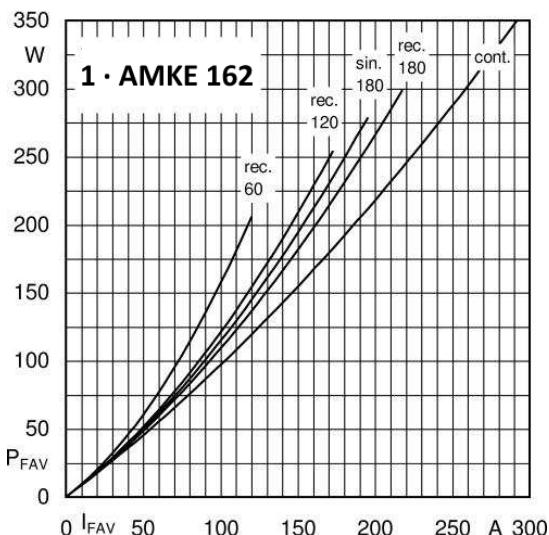


Fig. 11L Power dissipation per diode vs. forward current

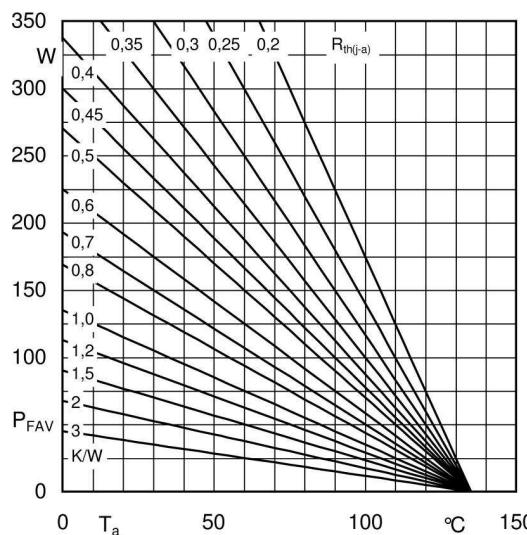


Fig. 11R Power dissipation per diode vs. ambient temperature

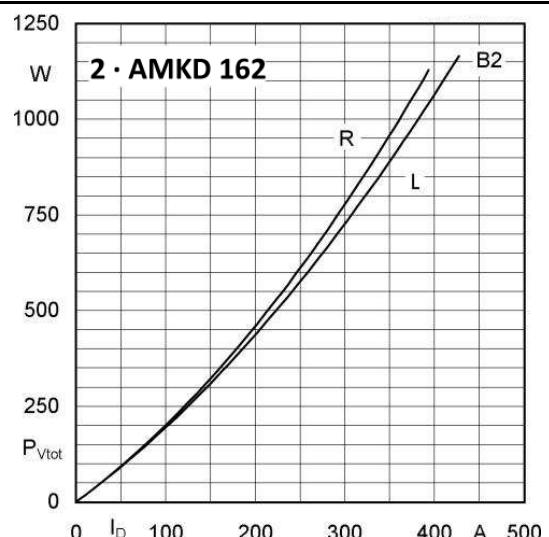


Fig. 12L Power dissipation of two modules vs. direct current

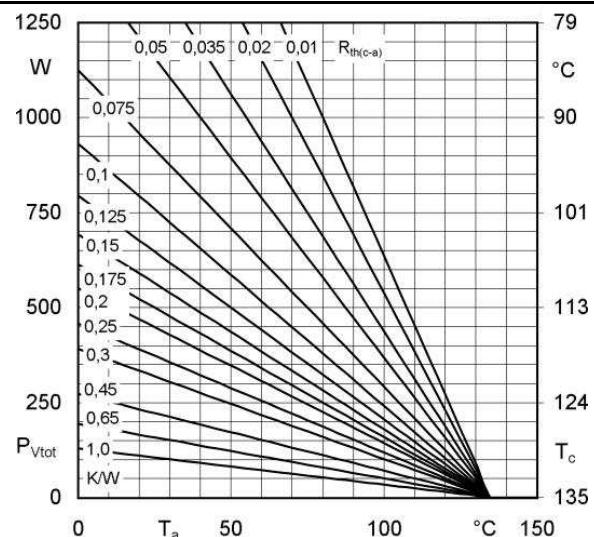


Fig. 12R Power dissipation of two modules vs. case temperature

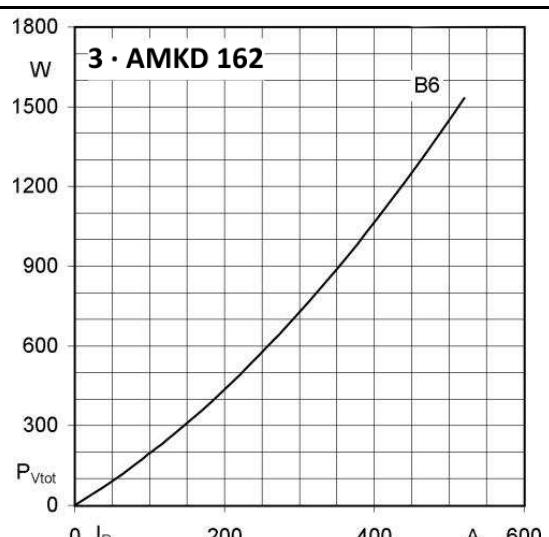


Fig. 13L Power dissipation of three modules vs. direct current

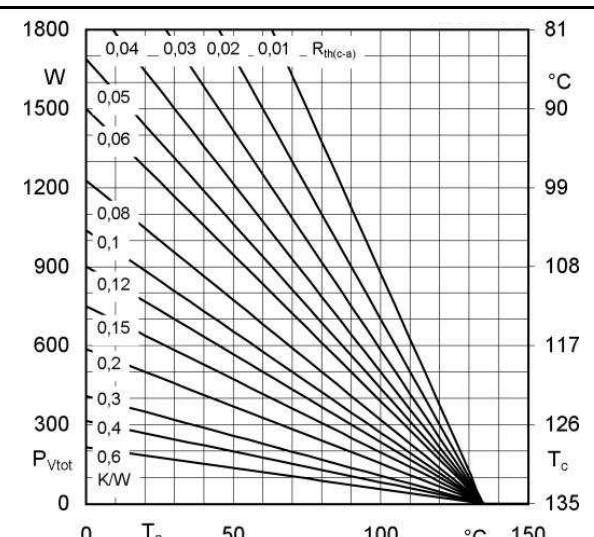


Fig. 13R Power dissipation of three modules vs. case temperature

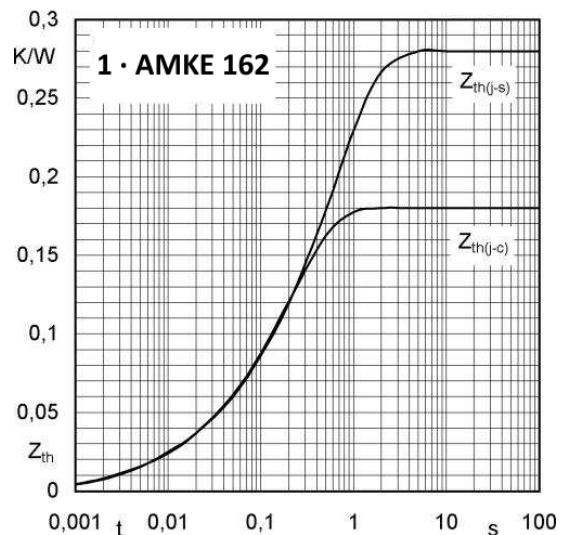


Fig. 14 Transient thermal impedance vs. time

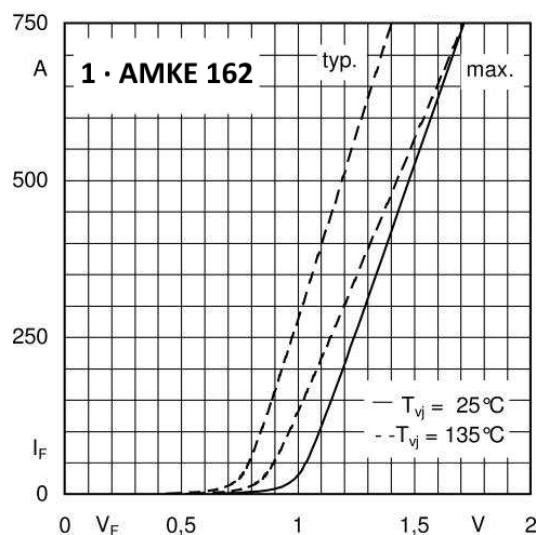


Fig. 15 Forward characteristics

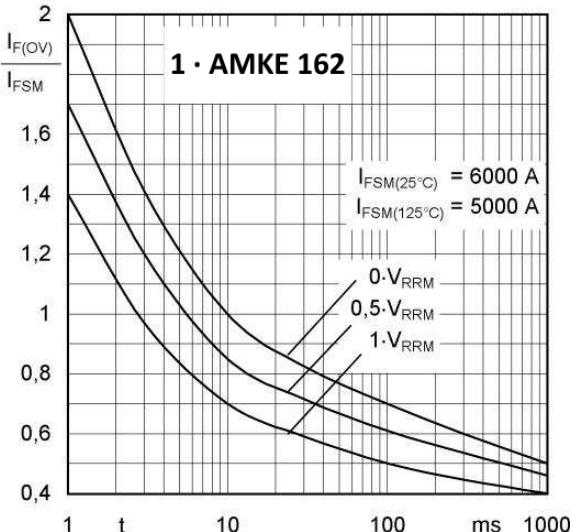
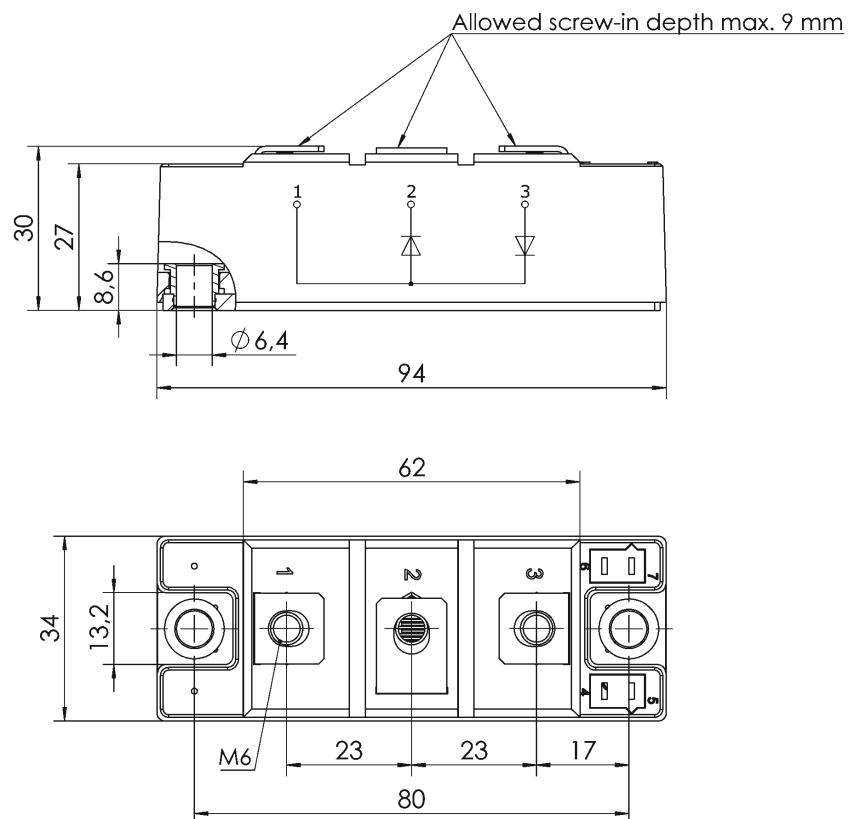


Fig. 16 Surge overload current vs. time

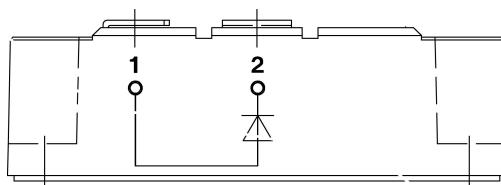
DIMENSIONS



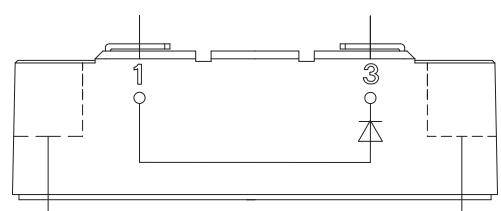
General tolerance $\pm 0,5$ mm

Dimensions in mm

TOPOLOGY OF INTERNAL CONNECTION



Case A24



Case A54