

Features

- Heat transfer through aluminium oxide ceramic isolated metal
- Hard soldered joints for high reliability
- Space and weight savings

Typical Applications

- Various rectifiers
- AC/DC Motor drives
- DC supply for PWM inverter

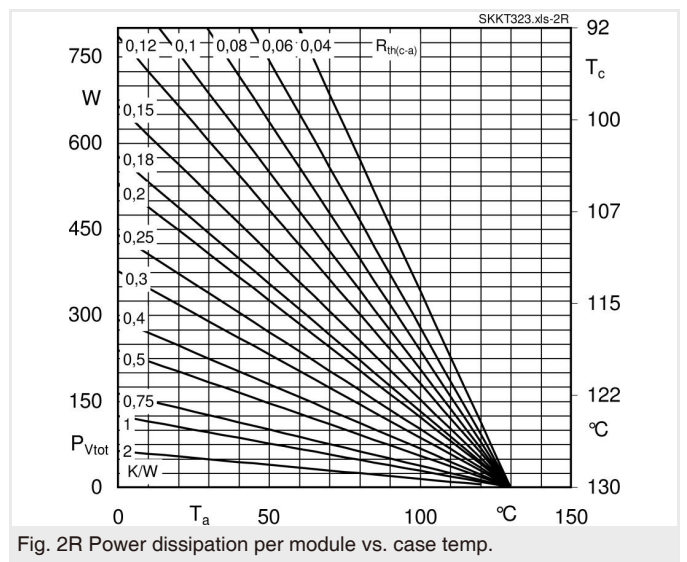
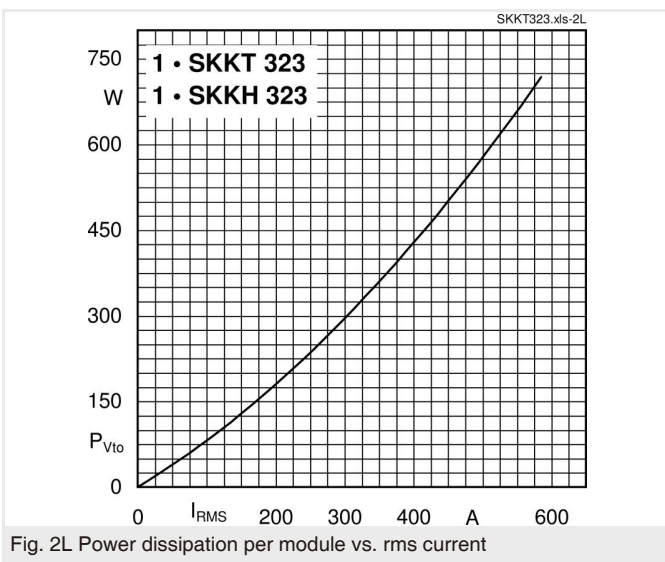
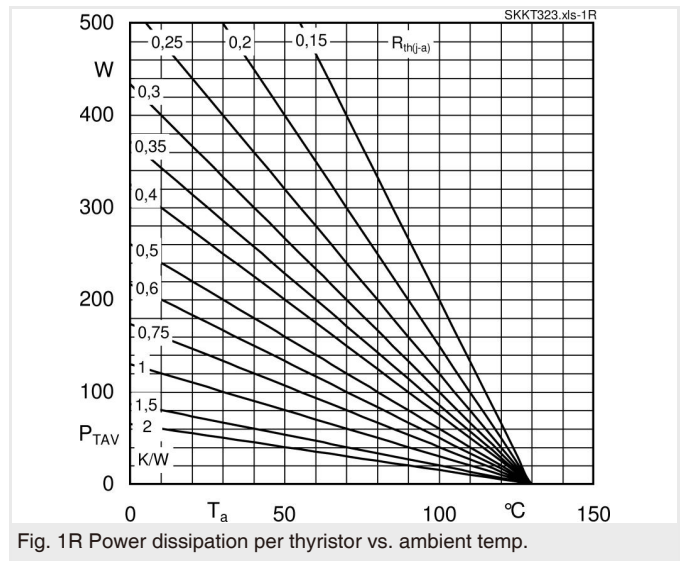
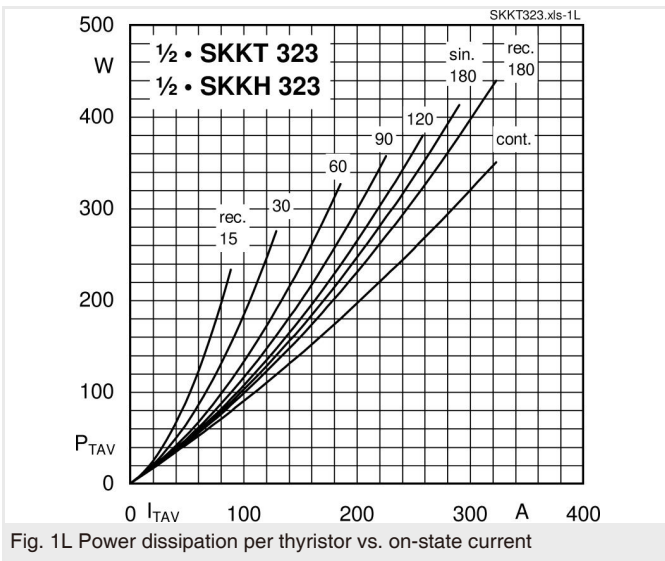


Symbol	I _{RMS} =520A (maximum value for continuous operation)				Units
	I _{TAV} =323A (sin.180; T _c =84°C)				
	SKKT323/12E	SKKT323/16E	SKKH323/12E	SKKH323/16E	
V _{RRM} ,V _{DRM}	1200	1600	1200	1600	V
V _{RSM}	1300	1700	1300	1700	V

Electrical characteristics

Symbol	Conditions	Values	Units
I_{TAV}	sin.180; $T_c=85(100)^{\circ}C$;	320(241)	A
I_{TSM}	$T_{vj}=25^{\circ}C$; 10ms	9500	A
	$T_{vj}=130^{\circ}C$; 10ms	8200	A
I^2t	$T_{vj}=25^{\circ}C$; 8.3...10ms	450000	A^2s
	$T_{vj}=130^{\circ}C$; 8.3...10ms	336000	A^2s
V_T	$T_{vj}=25^{\circ}C$, $I_T=750A$	max.1.45	V
$V_{T(TO)}$	$T_{vj}=130^{\circ}C$	max.0.81	V
r_T	$T_{vj}=130^{\circ}C$	max.0.85	$m\Omega$
I_{DD}, I_{RD}	$T_{vj}=130^{\circ}C$, $V_{RD}=V_{RRM}$; $V_{DD}=V_{DRM}$	max.100	mA
t_{gd}	$T_{vj}=25^{\circ}C$; $I_G=1A$; $di_G/dt=1A/\mu s$	1	μs
t_{gr}	$V_D=0.67 \cdot V_{DRM}$	2	μs
$(dv/dt)_{cr}$	$T_{vj}=130^{\circ}C$	max.1000	$V/\mu s$
$(di/dt)_{cr}$	$T_{vj}=130^{\circ}C$	max.130	$A/\mu s$
t_q	$T_{vj}=130^{\circ}C$	150	μs
I_H	$T_{vj}=25^{\circ}C$; typ./max.	150/500	mA
I_L	$T_{vj}=25^{\circ}C$; $R_G=33\Omega$; typ./max.	300/2000	mA
V_{GT}	$T_{vj}=25^{\circ}C$; d.c	min.2	V
I_{GT}	$T_{vj}=25^{\circ}C$; d.c	min.150	mA
V_{GD}	$T_{vj}=130^{\circ}C$; d.c	max.0.25	V
I_{GD}	$T_{vj}=130^{\circ}C$; d.c	max.10	mA

$R_{th(j-c)}$	cont.per thyristor/per module	0.091/0.0455	K/W
$R_{th(j-c)}$	sin.180;per thyristor/per module	0.095/0.475	K/W
$R_{th(j-c)}$	rec.120;per thyristor/per module	0.11/0.55	K/W
$R_{th(j-s)}$	per thyristor/per module	0.08/0.04	K/W
T_{vj}		-40...+130	°C
T_{stg}		-40...+125	°C
V_{isol}	a.c.50Hz; r.m.s; 1s/1min.	3600/3000	V~
M_s	to heatsink	$5 \pm 15\%$ ¹⁾	Nm
M_t	to terminals	$9 \pm 15\%$	Nm
a		5×9.81	m/s ²
m	approx.	410	g



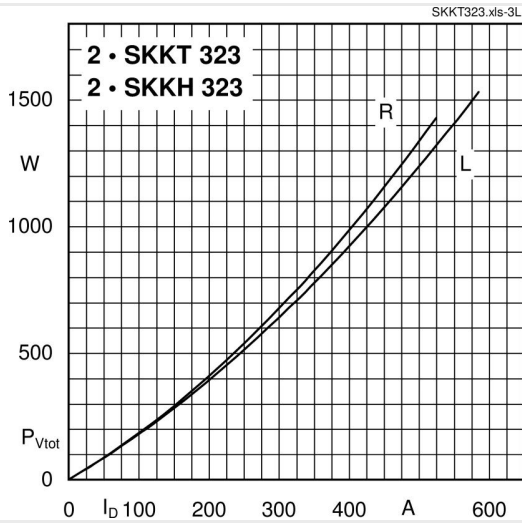


Fig. 3L Power dissipation of two modules vs. direct current

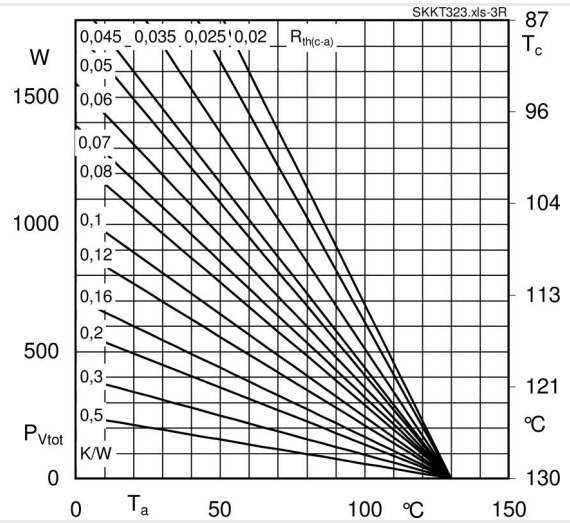


Fig. 3R Power dissipation of two modules vs. case temp.

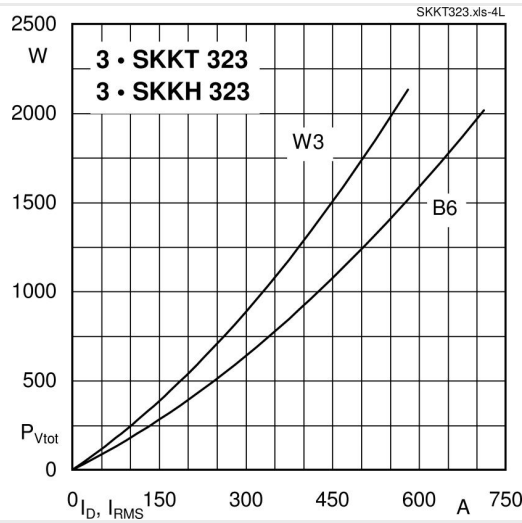


Fig. 4L Power dissipation of three modules vs. direct and rms current

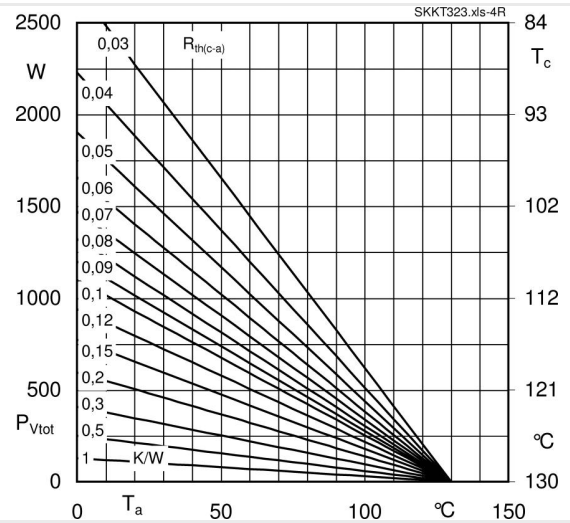


Fig. 4R Power dissipation of three modules vs. case temp.

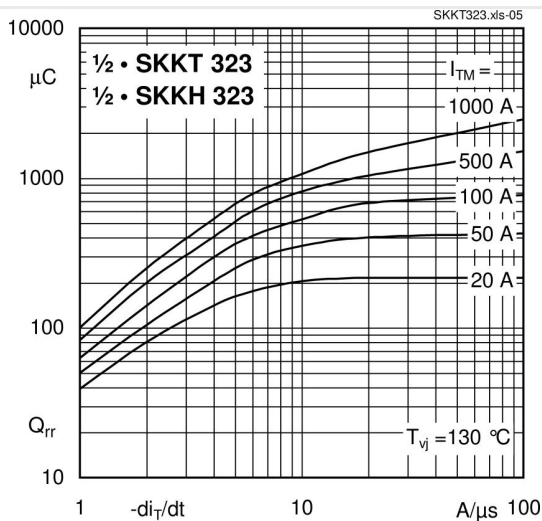


Fig. 5 Recovered charge vs. current decrease

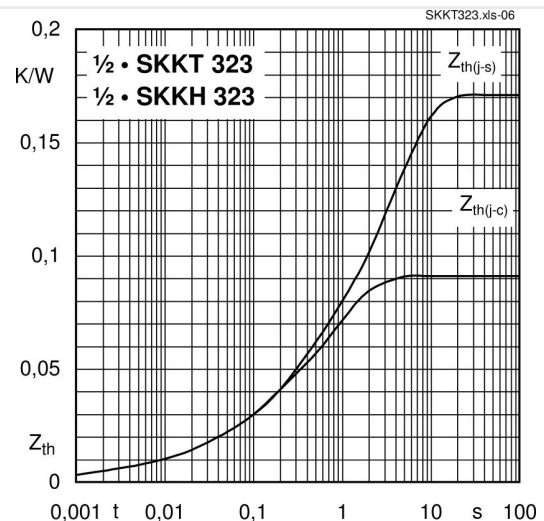


Fig. 6 Transient thermal impedance vs. time

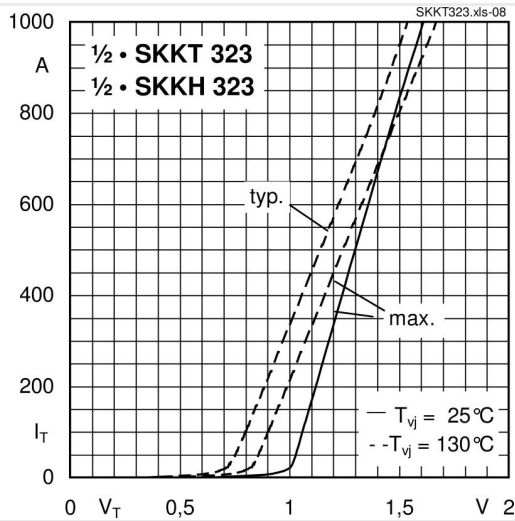


Fig. 7 On-state characteristics

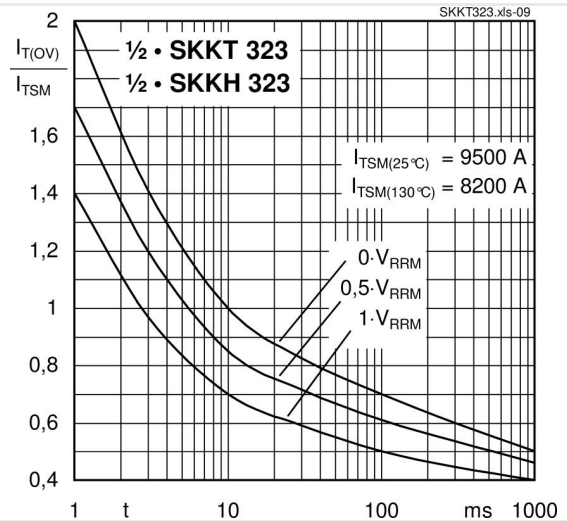


Fig. 8 Surge overload current vs. time

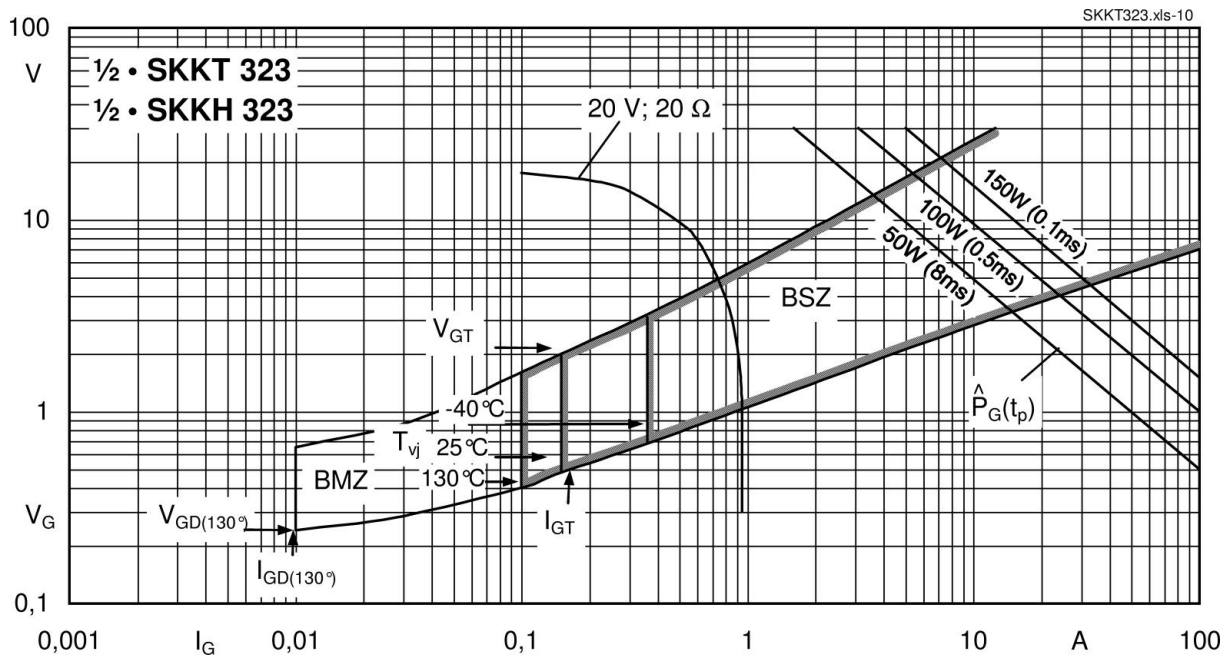
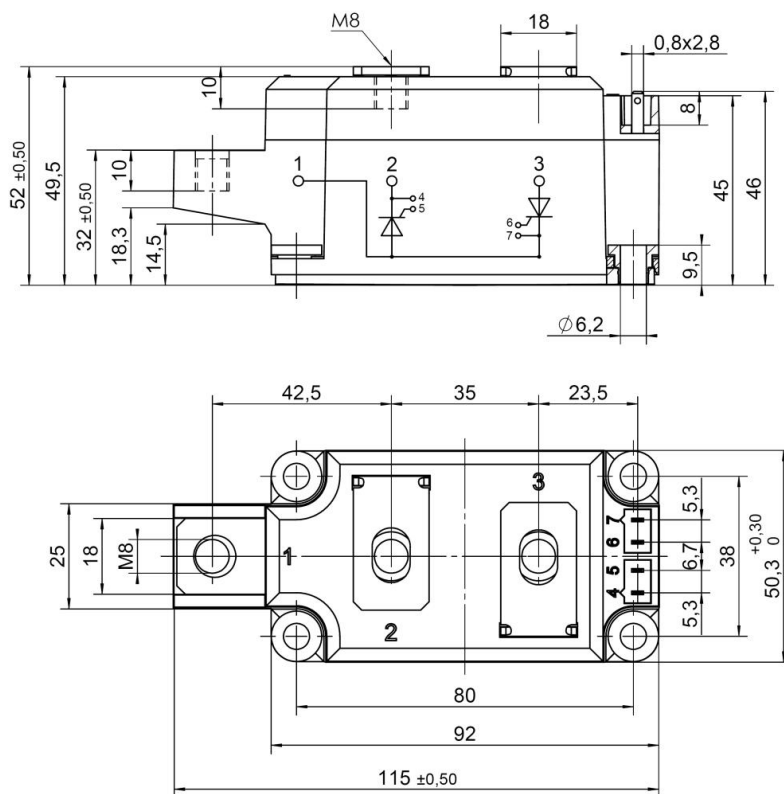


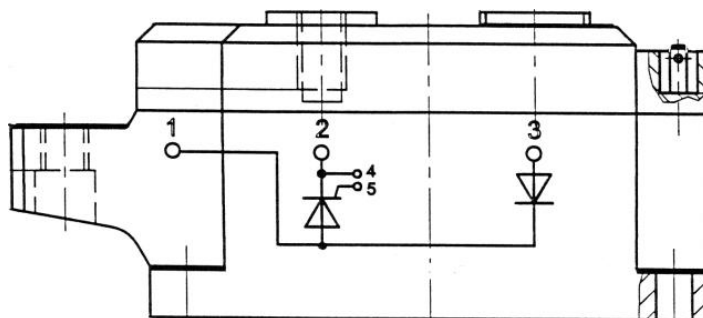
Fig. 9 Gate trigger characteristics

Dimensions in mm

05



Case A 43a (SKKT)



Case A 56a

SKKH