SKT55

Line Thyristor

STUD VERSION

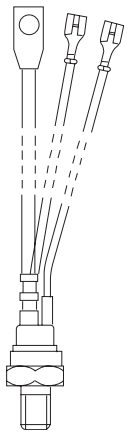
Liujing rectifier co., Ltd.

FEATURES

1). Hermetic metal case with glass insulator
2). Threaded stud ISO M12
3). International standard case

TYPICAL APPLICATIONS

1). DC motor control (e.g. for machine tools)
2). Controlled rectifiers (e.g. for battery charging)
3). AC controllers (e.g. for temperature control)
4). Recommended snubber network:
e.g. for V_{VRMS}≤400V: R=47Ω/10W, C=0.22μF



MAJOR RATINGS AND CHARACTERISTICS

V_{RSM} V	V_{RRM}, V_{DRM} V	I_{TRMS}=110A (maximum value for continuous operation) I_{TAV}=55A (sin. 180° ; T_C=92℃)
500	400	SKT 55/04D
700	600	SKT 55/06D
900	800	SKT 55/08D
1300	1200	SKT 55/12E
1500	1400	SKT 55/14E
1700	1600	SKT 55/16E
1900	1800	SKT 55/18E

1)* Available with UNF thread 1/4-28 UNF2A, e.g. SKT 16/06D UNF

ELECTRICAL SPECIFICATIONS

Symbol	Conditions	Values	V
I_{TAV}	sin. 180; T_C=100(85)℃	47(63)	A
I_D	K3; T_a=45℃; B2/B6	42/60	A
	K1.1; T_a=45℃; B2/B6	76/110	A
I_{RSM}	K3; T_a=45℃; W1C	46	A
I_{TSM}	T_{vj}=25℃; 10ms	1300	A
	T_{vj}=130℃; 10ms	1100	A
I^2t	T_{vj}=25℃; 8,35 ... 10ms	8500	A_2S
	T_{vj}=130℃; 8,35 ... 10ms	6000	A_2S
V_T	T_{vj}=25℃; I_T=200A	max. 1.8	V
$V_{T(TO)}$	T_{vj}=130℃	max. 0.9	V
r_T	T_{vj}=130℃	max. 4	mΩ
I_{DD}; I_{RD}	T_{vj}=130℃; V_{RD}=V_{RRM}; V_{DD}=V_{DRM}	max. 25	mA
t_{gd}	T_{vj}=25℃; I_G=1A; di_G/dt=1A μs	1	μs
t_{gr}	V_D=0.67 * V_{DRM}	2	μs
$(di/dt)_{cr}$	T_{vj}=130℃	max. 50	A/μs
$(dv/dt)_{cr}$	T_{vj}=130℃; SKT ... D/SKT ... E	max. 500/1000	V/μs
t_q	T_{vj}=130℃	100	μs
I_H	T_{vj}=25℃; typ./max.	150/250	mA
I_L	T_{vj}=25℃; typ./max.	300/600	mA

Symbol	Conditions	Values	V
V_{GT}	T_{vj}=25℃; d.c.	min.3	V
I_{GT}	T_{vj}=25℃; d.c.	min.150	mA
V_{GD}	T_{vj}=130℃; d.c.	max.0.25	V
I_{GD}	T_{vj}=130℃; d.c.	max.10	mA
$R_{th(j-c)}$	cont.	0.4	K/W
$R_{th(j-c)}$	sin.180	0.47	K/W
$R_{th(j-c)}$	rec.120	0.53	K/W
$R_{th(c-s)}$		0.08	K/W
T_{vj}		-40 ... +130	℃
T_{stg}		-55 ... +150	℃
V_{isol}		-	V~
M_s	to heatsink	10	Nm
a		5*9.81	m/s^2
m	approx.	65	g
Case		B5	

PERFORMANCE CURVES FIGURE

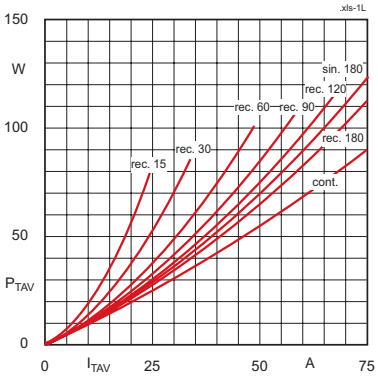


Fig. 1L Power dissipation vs. on-state current

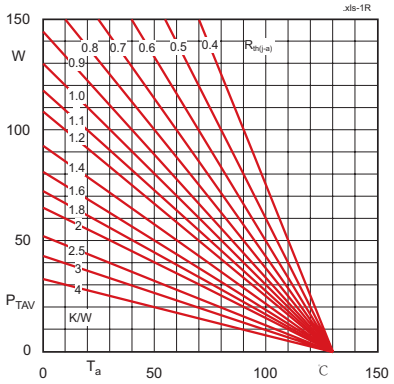


Fig. 1R Power dissipation vs. ambient temperature

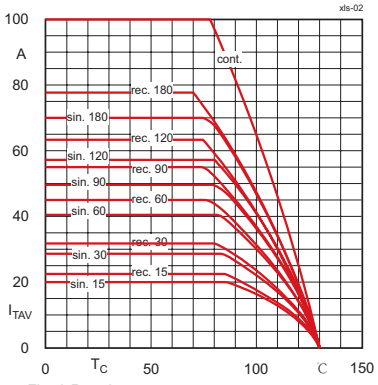


Fig. 2 Rated on-state current vs. case temperature

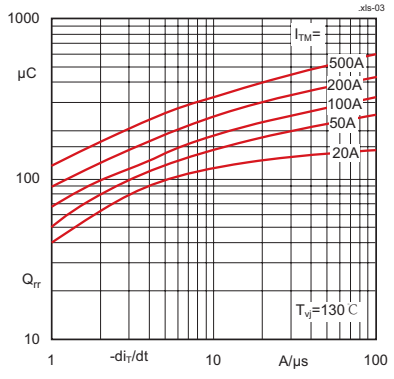


Fig. 3 Recovered charge vs. current decrease

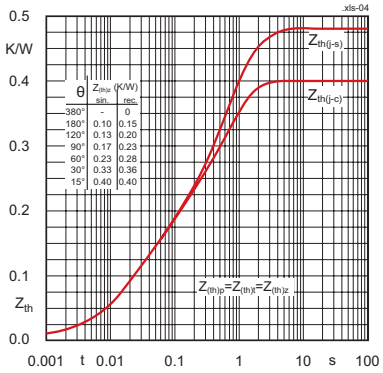


Fig. 4 Transient thermal impedance vs. time

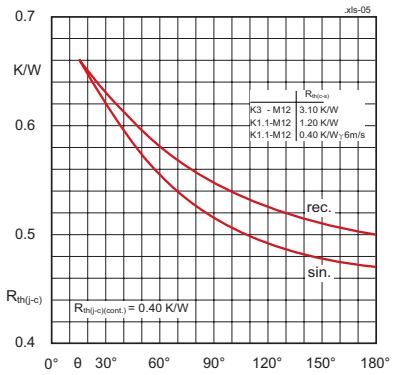


Fig. 5 Thermal resistance vs. conduction angle

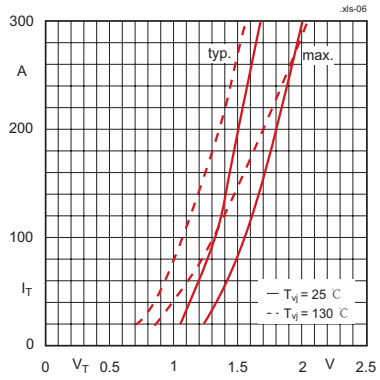


Fig. 6 On-state characteristics

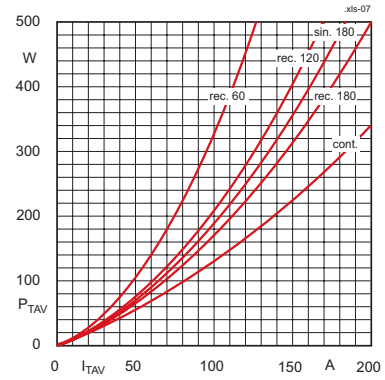


Fig. 7 Power dissipation vs. on-state current

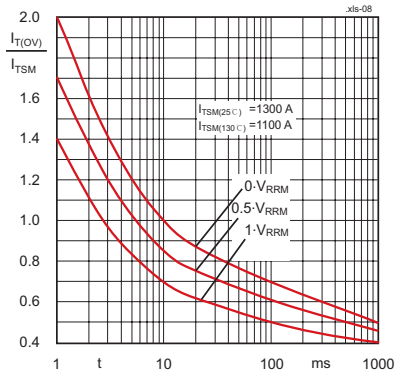


Fig. 8 Surge overload curent vs. time

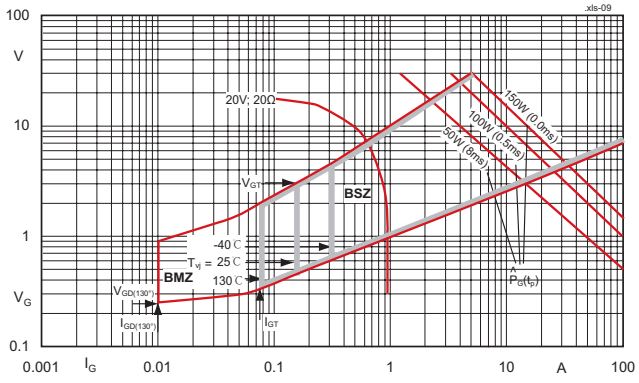
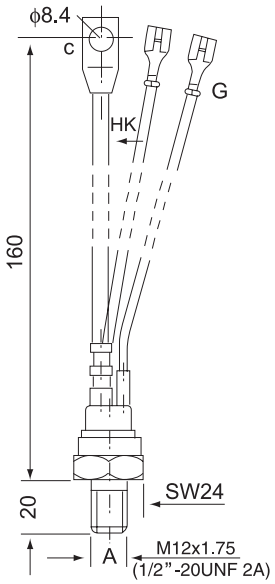


Fig. 9 Gate trigger characteristics

OUTLINE



SKT8

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