

### FEATURES

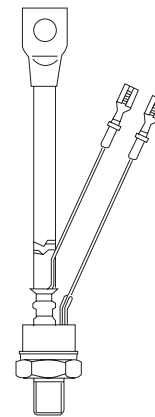
- 1). Hermetic metal case with glass insulator
- 2). Threaded stud ISO M16 × 1.5
- 3). International standard case

### MAJOR RATINGS AND CHARACTERISTICS

$V_{RSM}$	$V_{RRM}, V_{DRM}$	$I_{TRMS}=220A$ (maximum value for continuous operation) $I_{TAV}=130A$ (sin. 180° ; $T_C=85^{\circ}C$ )
V	V	
500	400	SKT 130/04D
700	600	SKT 130/06D
900	800	SKT 130/08D
1300	1200	SKT 130/12E
1500	1400	SKT 130/14E
1700	1600	SKT 130/16E

### 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  $V_{VRMS} \leq 400V$ :  $R=33\Omega/13W$ ,  $C=0.47\mu F$



### ELECTRICAL SPECIFICATIONS

Symbol	Conditions	Values	V
$I_{TAV}$	sin. 180; $T_C=100(85)^{\circ}C$	97(130)	A
$I_D$	K1.1; $T_a=45^{\circ}C$ ; B2/B6	90/125	A
	K0.55; $T_a=45^{\circ}C$ ; B2/B6	140/200	A
$I_{RSM}$	K0.55; $T_a=45^{\circ}C$ ; W1C	155	A
$I_{TSM}$	$T_{vj}=25^{\circ}C$ ; 10ms	3500	A
	$T_{vj}=130^{\circ}C$ ; 10ms	3000	A
$I^2t$	$T_{vj}=25^{\circ}C$ ; 8,35 ... 10ms	61000	A <sub>2</sub> S
	$T_{vj}=130^{\circ}C$ ; 8,35 ... 10ms	45000	A <sub>2</sub> S
$V_T$	$T_{vj}=25^{\circ}C$ ; $I_T=500A$	max. 2.25	V
$V_{T(TO)}$	$T_{vj}=130^{\circ}C$	max. 1.2	V
$r_T$	$T_{vj}=130^{\circ}C$	max. 2.2	mΩ
$I_{DD}; I_{RD}$	$T_{vj}=130^{\circ}C$ ; $V_{RD}=V_{RRM}$ ; $V_{DD}=V_{DRM}$	max. 50	mA
$t_{gd}$	$T_{vj}=25^{\circ}C$ ; $I_G=1A$ ; $di_G/dt=1A\mu s$	1	μs
$t_{gr}$	$V_D=0.67 * V_{DRM}$	2	μs
$(di/dt)_{cr}$	$T_{vj}=130^{\circ}C$	max. 100	A/μs
$(dv/dt)_{cr}$	$T_{vj}=130^{\circ}C$ ; SKT ... D/SKT ... E	max. 500/1000	V/μs
$t_q$	$T_{vj}=130^{\circ}C$	120	μs
$I_H$	$T_{vj}=25^{\circ}C$ ; typ./max.	150/250	mA
$I_L$	$T_{vj}=25^{\circ}C$ ; $R_G=33\Omega$ ; typ./max.	300/600	mA

Symbol	Conditions	Values	V
$V_{GT}$	$T_{vj}=25^{\circ}\text{C}$ ; d.c.	min.3	V
$I_{GT}$	$T_{vj}=25^{\circ}\text{C}$ ; d.c.	min.200	mA
$V_{GD}$	$T_{vj}=130^{\circ}\text{C}$ ; d.c.	max.0.25	V
$I_{GD}$	$T_{vj}=130^{\circ}\text{C}$ ; d.c.	max.10	mA
$R_{th(j-c)}$	cont.	0.16	K/W
$R_{th(j-c)}$	sin.180	0.18	K/W
$R_{th(j-c)}$	rec.120	0.2	K/W
$R_{th(c-s)}$		0.03	K/W
$T_{vj}$		-40 ... +130	$^{\circ}\text{C}$
$T_{stg}$		-55 ... +150	$^{\circ}\text{C}$
$V_{isol}$		-	V~
$M_s$	to heatsink	30	Nm
a		5*9.81	$\text{m/s}^2$
m	approx.	250	g
Case		B6	

PERFORMANCE CURVES FIGURE

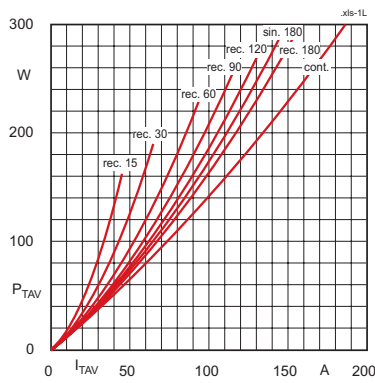


Fig. 1L Power dissipation vs. on-state current

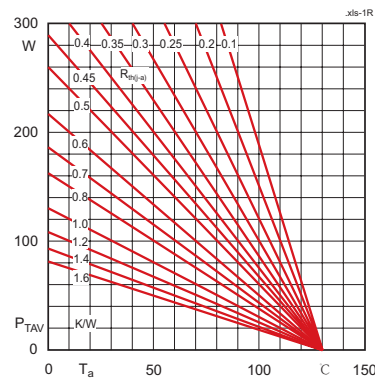


Fig. 1R Power dissipation vs. ambient temperature

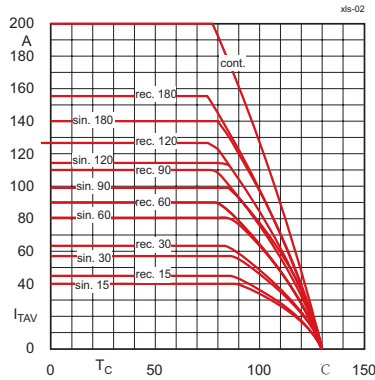


Fig. 2 Rated on-state current vs. case temperature

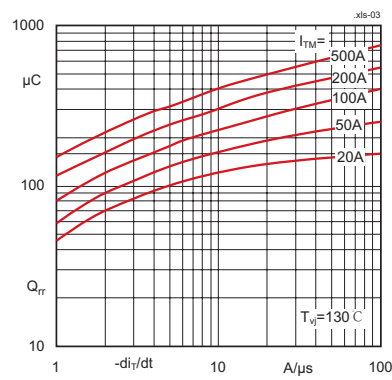


Fig. 3 Recovered charge vs. current decrease

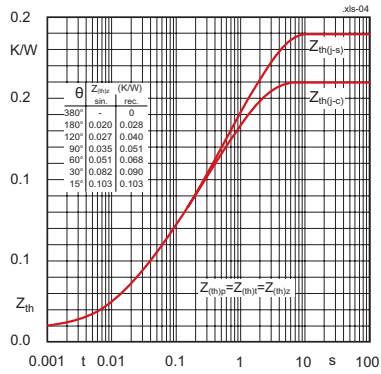


Fig. 4 Transient thermal impedance vs. time

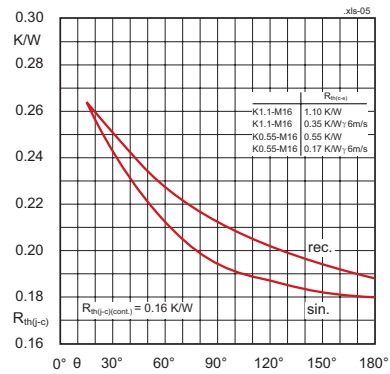


Fig. 5 Thermal resistance vs. conduction angle

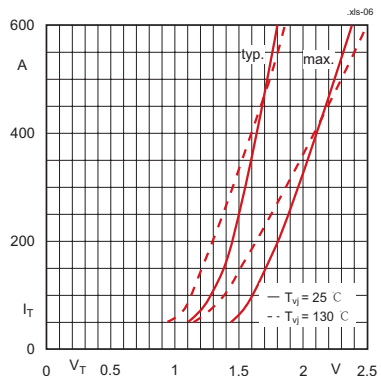


Fig. 6 On-state characteristics

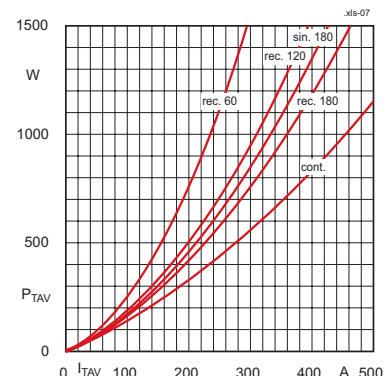


Fig. 7 Power dissipation vs. on-state current

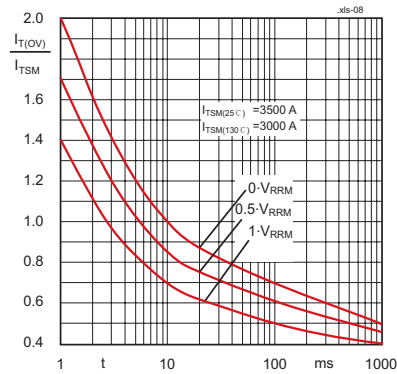


Fig. 8 Surge overload current vs. time

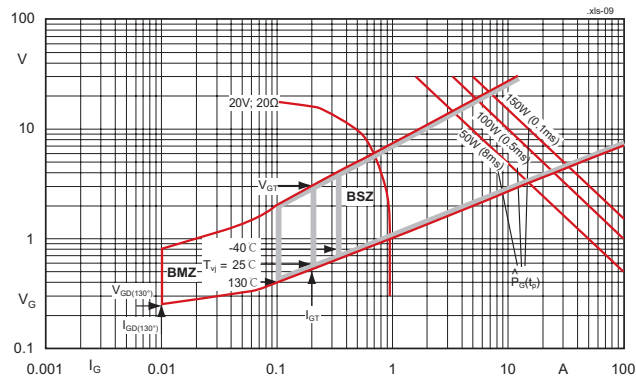
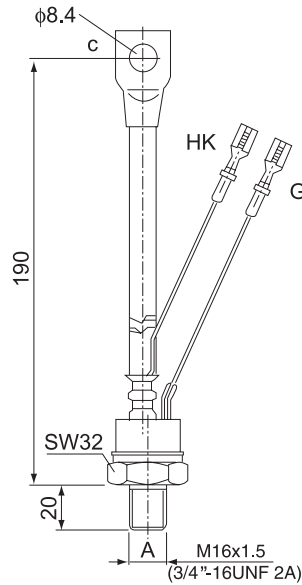


Fig. 9 Gate trigger characteristics

**OUTLINE**



**SKT9**

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