### **SKET 330**



# SEMIPACK<sup>®</sup> 4

## **Thyristor Modules**

#### **SKET 330**

#### **Features**

- Heat transfer through aluminium nitride ceramic isolated metal baseplate
- Precious metal pressure contacts for high reliability
- Thyristor with amplifying gate
- UL recognized, file no. E 63 532

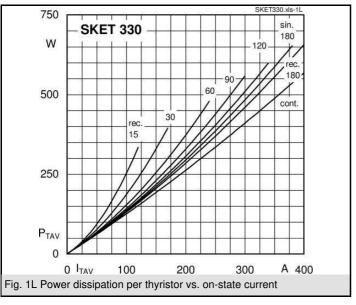
#### **Typical Applications\***

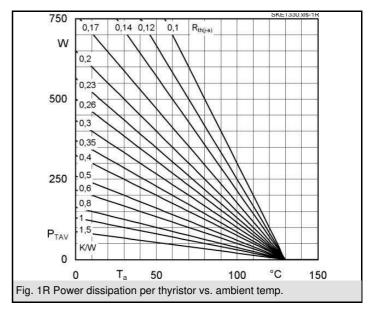
- DC motor control (e. g. for machine tools)
- Temperature control (e. g. for ovens, chemical processes)
- Professional light dimming (studios, theaters)
- 1) See the assembly instructions

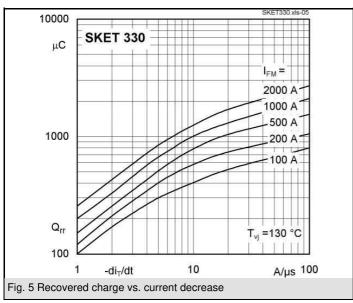
V <sub>RSM</sub>	V <sub>RRM</sub> , V <sub>DRM</sub>	I <sub>TRMS</sub> = 600 A (maximum value for continuous operation)	
V	V	$I_{TAV} = 330 \text{ A (sin. 180; T}_{c} = 78 ^{\circ}\text{C})$	
1300	1200	SKET 330/12E	
1500	1400	SKET 330/14E	
1700	1600	SKET 330/16E	
1900	1800	SKET 330/18E	
2300	2200	SKET 330/22E	

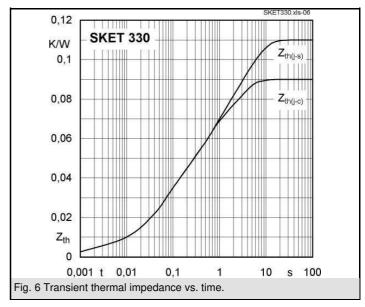
Symbol	Conditions	Values	Units
I <sub>TAV</sub>	sin. 180; T <sub>c</sub> = 85 (100) °C;	295 (210 )	Α
I <sub>D</sub>	P16/300F; T <sub>a</sub> = 35 °C; B2 / B6	530 / 665	Α
I <sub>RMS</sub>	P16/400F; T <sub>a</sub> = 35 °C; W1 / W3	685 / 3 * 550	Α
I <sub>TSM</sub>	T <sub>vi</sub> = 25 °C; 10 ms	9000	Α
	T <sub>vi</sub> = 130 °C; 10 ms	8000	Α
i²t	T <sub>vj</sub> = 25 °C; 8,3 10 ms	405000	A²s
	T <sub>vj</sub> = 130 °C; 8,3 10 ms	320000	A²s
$V_{T}$	T <sub>vj</sub> = 25 °C; I <sub>T</sub> = 1500 A	max. 2,05	V
$V_{T(TO)}$	$T_{vj} = 130  ^{\circ}C$	max. 1,2	V
r <sub>T</sub>	T <sub>vj</sub> = 130 °C	max. 0,55	mΩ
$I_{DD}; I_{RD}$	$T_{vj}$ = 130 °C; $V_{RD}$ = $V_{RRM}$ ; $V_{DD}$ = $V_{DRM}$	max. 200	mA
t <sub>gd</sub>	$T_{vj} = 25 ^{\circ}\text{C}; I_G = 1 \text{A}; di_G/dt = 1 \text{A/}\mu\text{s}$	1	μs
t <sub>gr</sub>	$V_{\rm D} = 0.67 * V_{\rm DRM}$	2	μs
(di/dt) <sub>cr</sub>	T <sub>vj</sub> = 130 °C	max. 125	A/µs
(dv/dt) <sub>cr</sub>	$T_{vj} = 130  ^{\circ}C$	max. 1000	V/µs
t <sub>q</sub>	$T_{vj} = 130 ^{\circ}\text{C}$	150 200	μs
I <sub>H</sub>	$T_{vj}$ = 25 °C; typ. / max.	150 / 500	mA
IL	$T_{vj}$ = 25 °C; $R_G$ = 33 $\Omega$ ; typ. / max.	500 / 2000	mA
V <sub>GT</sub>	$T_{vj}$ = 25 °C; d.c.	min. 3	V
$I_{GT}$	$T_{vj}^{''}$ = 25 °C; d.c.	min. 200	mA
$V_{GD}$	$T_{vj} = 130  ^{\circ}\text{C}; \text{d.c.}$	max. 0,25	V
$I_{GD}$	$T_{vj} = 130  ^{\circ}\text{C}; \text{d.c.}$	max. 10	mA
$R_{th(j-c)}$	cont.	0,09	K/W
R <sub>th(j-c)</sub>	sin. 180	0,095	K/W
R <sub>th(j-c)</sub>	rec. 120	0,11	K/W
R <sub>th(c-s)</sub>		0,02	K/W
$T_{vj}$		- 40 <b>+</b> 130	°C
T <sub>stg</sub>		- 40 + 130	°C
V <sub>isol</sub>	a. c. 50 Hz; r.m.s.; 1s / 1 min.	3600 / 3000	V~
$M_s$	to heatsink	5 ± 15 % <sup>1)</sup>	Nm
M <sub>t</sub>	to terminal	17 ± 15 %	Nm
а		5 * 9,81	m/s²
m	approx.	840	g
Case		A 36	

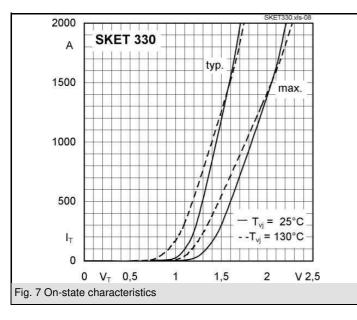


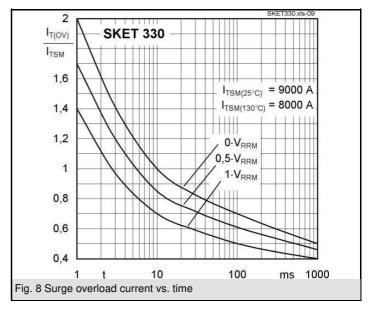




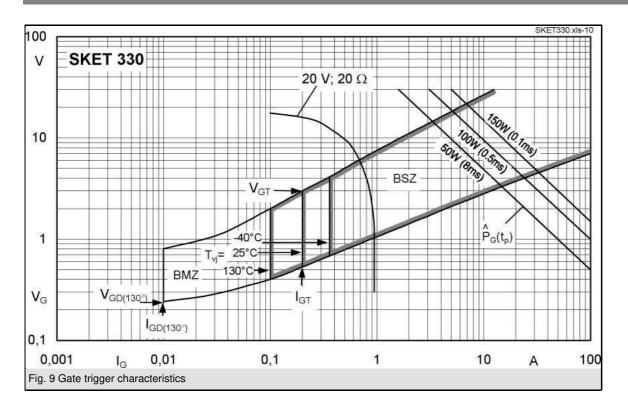


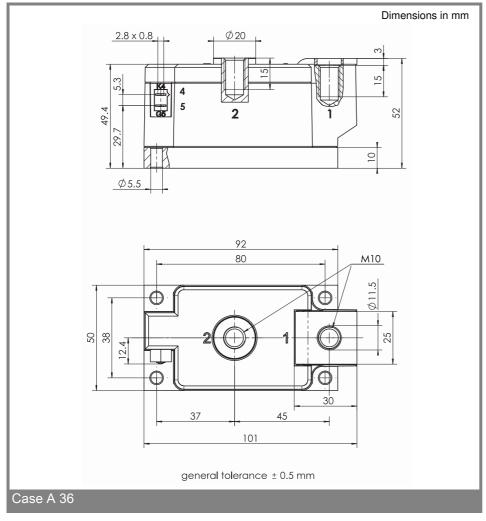


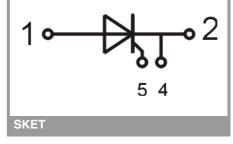




## **SKET 330**







This is an electrostatic discharge sensitive device (ESDS) due to international standard IEC 61340.

#### \*IMPORTANT INFORMATION AND WARNINGS

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