



SEMIPACK® 1

Thyristor / Diode Modules

SKKT 20

SKKT 20B

Features

- Heat transfer through aluminium oxide ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- UL recognized, file no. E 63 532

Typical Applications

- DC motor control (e. g. for machine tools)
- AC motor soft starters
- Temperature control (e. g. for ovens, chemical processes)
- Professional light dimming (studios, theaters)

¹⁾ See the assembly instructions



SKKT

V_{RSM}	V_{RRM} , V_{DRM}	$I_{TRMS} = 40$ A (maximum value for continuous operation)	
V	V	$I_{TAV} = 20$ A (sin. 180; $T_c = 80$ °C)	
900	800	SKKT 20/08E	SKKT 20B08E
1300	1200	SKKT 20/12E	SKKT 20B12E
1500	1400	SKKT 20/14E	SKKT 20B14E
1700	1600	SKKT 20/16E	SKKT 20B16E

Symbol	Conditions	Values	Units
I_{TAV}	sin. 180; $T_c = 85$ (100) °C	18 (13)	A
I_D	P3/180; $T_a = 45$ °C; B2 / B6	31 / 38	A
	P3/180F; $T_a = 35$ °C; B2 / B6	46 / 60	A
I_{RMS}	P3/180; $T_a = 45$ °C; W1 / W3	42 / 3 * 30	A
I_{TSM}	$T_{vj} = 25$ °C; 10 ms	320	A
	$T_{vj} = 125$ °C; 10 ms	280	A
i^2t	$T_{vj} = 25$ °C; 8,3 ... 10 ms	510	A ² s
	$T_{vj} = 125$ °C; 8,3 ... 10 ms	390	A ² s
V_T	$T_{vj} = 25$ °C; $I_T = 75$ A	max. 2,3	V
$V_{T(TO)}$	$T_{vj} = 125$ °C	max. 1	V
r_T	$T_{vj} = 125$ °C	max. 16	m•
I_{DD} ; I_{RD}	$T_{vj} = 125$ °C; $V_{RD} = V_{RRM}$; $V_{DD} = V_{DRM}$	max. 10	mA
t_{gd}	$T_{vj} = 25$ °C; $I_G = 1$ A; $di_G/dt = 1$ A/ μ s	1	μ s
t_{gr}	$V_D = 0,67 * V_{DRM}$	1	μ s
$(di/dt)_{cr}$	$T_{vj} = 125$ °C	max. 150	A/ μ s
$(dv/dt)_{cr}$	$T_{vj} = 125$ °C	max. 1000	V/ μ s
t_q	$T_{vj} = 125$ °C	80	μ s
I_H	$T_{vj} = 25$ °C; typ. / max.	100 / 200	mA
I_L	$T_{vj} = 25$ °C; $R_G = 33$ •; typ. / max.	250 / 400	mA
V_{GT}	$T_{vj} = 25$ °C; d.c.	min. 3	V
I_{GT}	$T_{vj} = 25$ °C; d.c.	min. 150	mA
V_{GD}	$T_{vj} = 125$ °C; d.c.	max. 0,25	V
I_{GD}	$T_{vj} = 125$ °C; d.c.	max. 5	mA
$R_{th(j-c)}$	cont.; per thyristor / per module	1,2 / 0,6	K/W
$R_{th(j-c)}$	sin. 180; per thyristor / per module	1,3 / 0,65	K/W
$R_{th(j-c)}$	rec. 120; per thyristor / per module	1,35 / 0,68	K/W
$R_{th(c-s)}$	per thyristor / per module	0,2 / 0,1	K/W
T_{vj}		- 40 ... + 125	°C
T_{stg}		- 40 ... + 125	°C
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s / 1 min.	3600 / 3000	V~
M_s	to heatsink	5 ± 15 % ¹⁾	Nm
M_t	to terminal	3 ± 15 %	Nm
a		$5 * 9,81$	m/s ²
m	approx.	95	g
Case	SKKT	A 46	
	SKKT ...B	A 48	

Diagrams