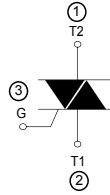
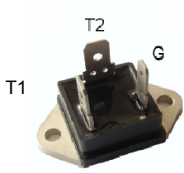
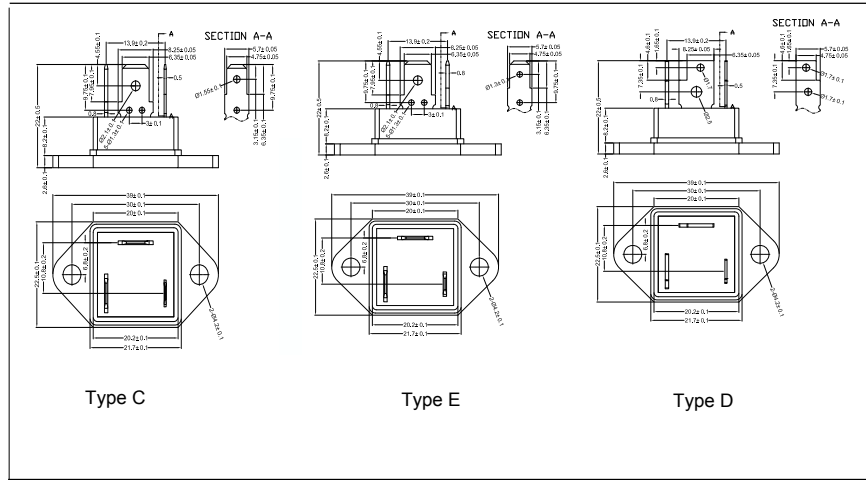


SBTA41G04B thru SBTA41G16B

Discrete Triacs (Isolated)



Unit:mm



	VDRM/RRM	VDSM/RSM
	V	V
SBTA41G04B	400	500
SBTA41G06B	600	700
SBTA41G08B	800	900
SBTA41G10B	1000	1100
SBTA41G12B	1200	1300
SBTA41G16B	1600	1700

Symbol	Test Conditions	Maximum Ratings	Unit	
I_{TRMS}	$T_{VJ}=80\text{ }^{\circ}\text{C}$	40	A	
I_{TSM}	$T_{VJ}=45\text{ }^{\circ}\text{C}$ $V_R=0$ $t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine	420 400	A	
	$T_{VJ}=T_{VJM}$ $V_R=0$ $t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine	350 320		
i^2t	$T_{VJ}=45\text{ }^{\circ}\text{C}$ $V_R=0$ $t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine	880 850	A^2s	
	$T_{VJ}=T_{VJM}$ $V_R=0$ $t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine	760 720		
$(di/dt)_{cr}$	$T_{VJ}=T_{VJM}$ $f=50\text{Hz}$, $t_p=200\text{us}$ $V_D=2/3V_{DRM}$ $I_G=0.3\text{A}$ $di_G/dt=0.3\text{A/us}$	repetitive, $I_T=40\text{A}$ non repetitive, $I_T=I_{TAVM}$	50 300	A/us
	$(dv/dt)_{cr}$	$T_{VJ}=T_{VJM}$; $R_{GK}=\infty$; method 1 (linear voltage rise)	$V_{DR}=2/3V_{DRM}$	500
P_{GM}	$T_{VJ}=T_{VJM}$ $I_T=I_{TAVM}$	$t_p=30\text{us}$ $t_p=300\text{us}$	10 5	W
$P_{GA V}$			1	W
V_{RGM}			10	V
T_{VJ} T_{VJM} T_{stg}			-40...+125 125 -40...+125	$^{\circ}\text{C}$
V_{ISOL}	50/60Hz, RMS $t=1\text{minute}$, leads-to-tab		2500	V~
M_d	Mounting torque (M4)		0.8...1.5	Nm
Weight			25	g

Sirectifier[®]

SBTA41G04B thru SBTA41G16B

Discrete Triacs(Isolated)

Symbol	Test Conditions	Characteristic Values	Unit				
I_R, I_D	$T_{VJ}=T_{VJM}; V_D=V_{DRM}$	10	mA				
V_{TM}	$I_T=60A; T_{VJ}=25^{\circ}C$	1.44	V				
V_{TO}	For power-loss calculations only ($T_{VJ}=125^{\circ}C$)	0.85	V				
r_T		10	Ω				
V_{GT}	<table border="1"> <tr><td>I</td></tr> <tr><td>II</td></tr> <tr><td>III</td></tr> <tr><td>IV</td></tr> </table> $V_D=6V; I_T=1A; T_{VJ}=25^{\circ}C$	I	II	III	IV	1.3	V
		I					
		II					
		III					
IV							
1.3							
1.3							
1.5							
I_{GT}	<table border="1"> <tr><td>I</td></tr> <tr><td>II</td></tr> <tr><td>III</td></tr> <tr><td>IV</td></tr> </table> $V_D=6V; I_T=1A; T_{VJ}=25^{\circ}C$	I	II	III	IV	50	mA
		I					
		II					
		III					
IV							
50							
50							
100							
V_{GD}	$T_{VJ}=T_{VJM}; V_D=2/3V_{DRM}$	0.2	V				
I_{GD}		10	mA				
I_H	$T_{VJ}=25^{\circ}C; V_D=6V; R_{GK}=\infty$	100	mA				
R_{thJC}	DC current	1.3	K/W				
R_{thJH}	DC current	1.5	K/W				
a	Max. acceleration, 50 Hz	50	m/s^2				

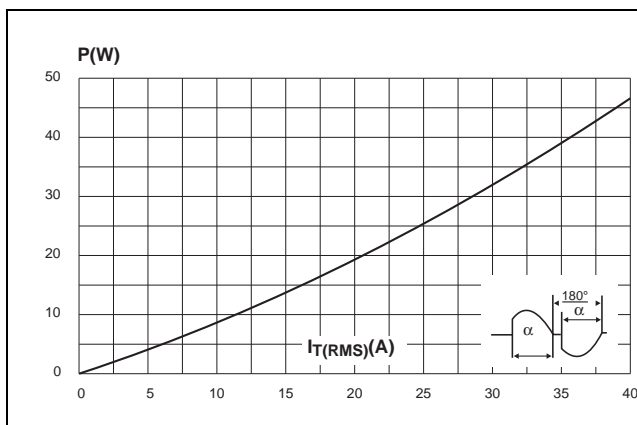


Figure 1. Maximum power dissipation versus on-state rms current (full cycle)

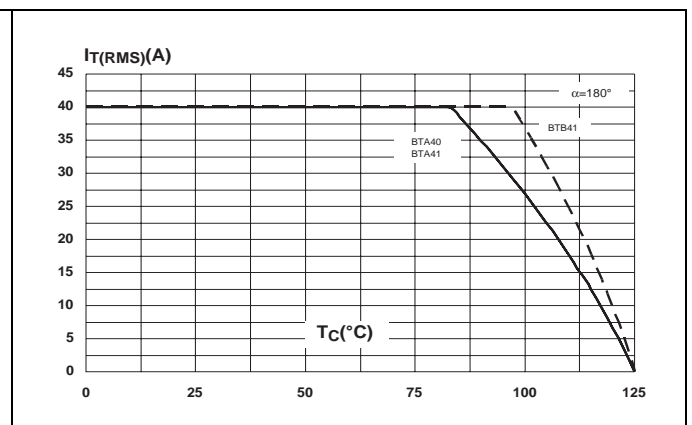


Figure 2. On-state rms current versus case temperature (full cycle)

Sirectifier®

SBTA41G04B thru SBTA41G16B

Discrete Triacs (Isolated)

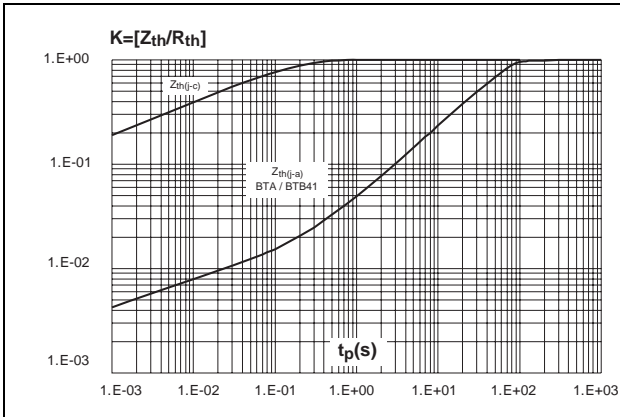


Figure 3. Relative variation of thermal impedance versus pulse duration

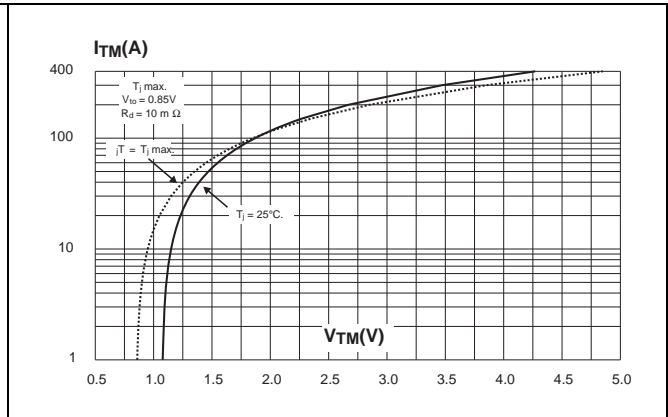


Figure 4. On-state characteristics (maximum values)

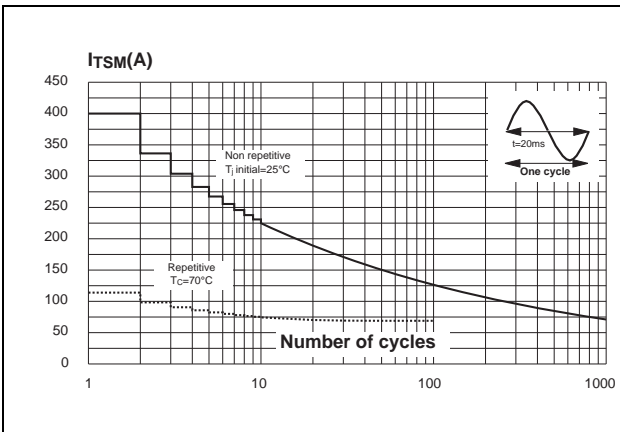


Figure 5. Surge peak on-state current versus number of cycles

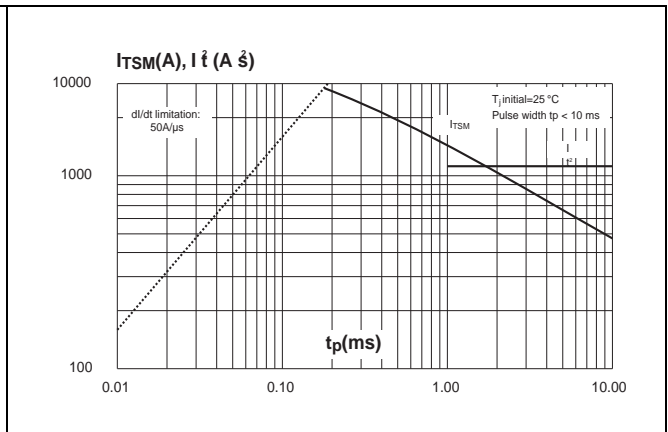


Figure 6. Non-repetitive surge peak on-state current for a sinusoidal pulse and corresponding value of I^2t

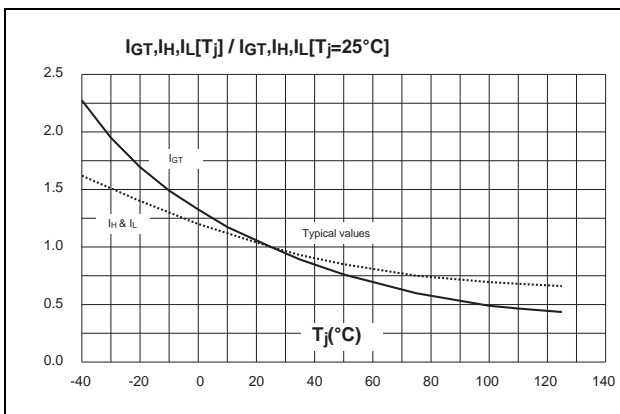


Figure 7. Relative variation of gate trigger, holding and latching current versus junction temperature

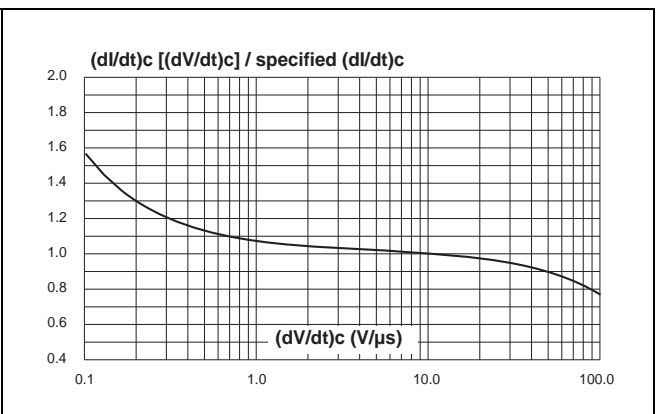


Figure 8. Relative variation of critical rate of decrease of main current versus $(dV/dt)_c$ (typical values)

Sirectifier®