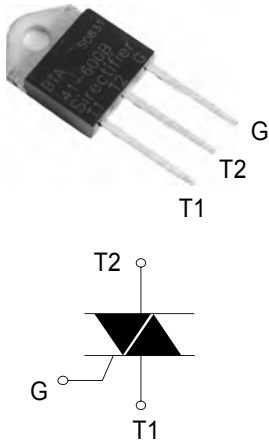
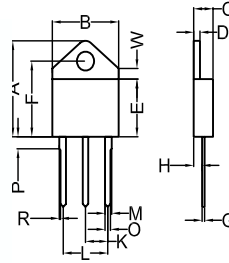


Unit:mm



	V_{DRM}	V_{DSM}
	V	V
BTA41-200	200	220
BTA41-400	400	450
BTA41-600	600	700
BTA41-800	800	900
BTA41-1000	1000	1100
BTA41-1200	1200	1300



Dim.	Inches		Millimeter	
	min	max	min	max
A	0.81	0.835	20.57	21.21
B	0.61	0.63	15.49	16
C	0.178	0.188	4.52	4.78
D	0.055	0.07	1.4	1.78
E	0.487	0.497	12.37	12.62
F	0.635	0.655	16.13	16.64
G	0.022	0.029	0.56	0.74
H	0.075	0.095	1.91	2.41
J	0.575	0.625	14.61	15.88
K	0.211	0.219	5.36	5.56
L	0.422	0.437	10.72	11.1
M	0.058	0.068	1.47	1.72
N	0.045	0.055	1.14	1.4
P	0.095	0.115	2.41	2.92
O	0.008	0.016	0.2	0.41
R	0.008	0.016	0.2	0.41
U	0.159	0.163	4.04	4.14
W	0.085	0.095	2.17	2.42

Symbol	Test Conditions	Maximum Ratings	Unit
I_{TRMS}	$T_{VJ}=80^{\circ}C$	41	A
I_{TSM}	$T_{VJ}=45^{\circ}C$ $V_R=0$ $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	420 400	A
	$T_{VJ}=T_{VJM}$ $V_R=0$ $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	350 320	
i^2t	$T_{VJ}=45^{\circ}C$ $V_R=0$ $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	880 850	A^2s
	$T_{VJ}=T_{VJM}$ $V_R=0$ $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	760 720	
$(di/dt)_{cr}$	$T_{VJ}=T_{VJM}$ $f=50Hz$, $t_p=200us$ $V_D=2/3V_{DRM}$ $I_G=0.3A$ $di_G/dt=0.3A/us$ repetitive, $I_T=40A$	50	A/us
	non repetitive, $I_T=I_{TAVM}$	300	
$(dv/dt)_{cr}$	$T_{VJ}=T_{VJM}$; $R_{GK}=\infty$; method 1 (linear voltage rise) $V_{DR}=2/3V_{DRM}$	500	V/us
P_{GM}	$T_{VJ}=T_{VJM}$ $I_T=I_{TAVM}$ $t_p=30us$	10	W
	$t_p=300us$	5	
P_{GAV}		1	W
V_{RGM}		10	V
T_{VJ} T_{VJM} T_{stg}		-40...+125 125 -40...+125	$^{\circ}C$
V_{ISOL}	50/60Hz, RMS $t=1$ minute, leads-to-tab	2500	V~
M_d	Mounting torque (M4)	0.8...1.5	Nm
Weight		6	g

Symbol	Test Conditions		Characteristic Values	Unit
I_R, I_D	$T_{VJ}=T_{VJM}; V_D=V_{DRM}$		10	mA
V_{TM}	$I_T=41A; T_{VJ}=25^{\circ}C$		1.44	V
V_{TO}	For power-loss calculations only ($T_{VJ}=125^{\circ}C$)		0.85	V
r_T			10	$m\Omega$
V_{GT}	I	$V_D=6V; I_T=1A; T_{VJ}=25^{\circ}C$	1.3	V
	II		1.3	
	III		1.3	
	IV		1.5	
I_{GT}	I	$V_D=6V; I_T=1A; T_{VJ}=25^{\circ}C$	50	mA
	II		50	
	III		50	
	IV		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

Fig. 1: Maximum power dissipation versus RMS on-state current (full cycle).

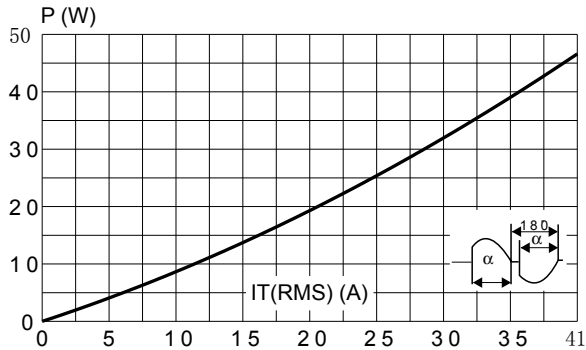


Fig. 3: Relative variation of thermal impedance versus pulse duration.

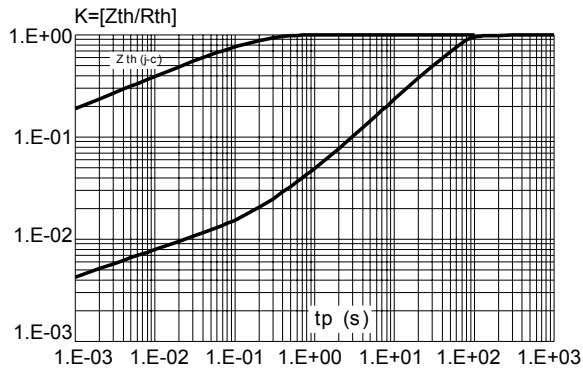


Fig. 5: Surge peak on-state current versus number of cycles.

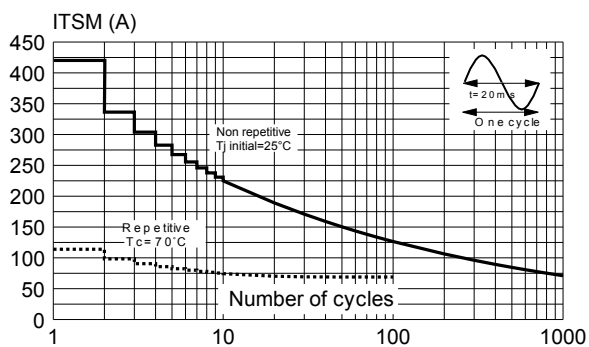


Fig. 2: RMS on-state current versus case temperature (full cycle).

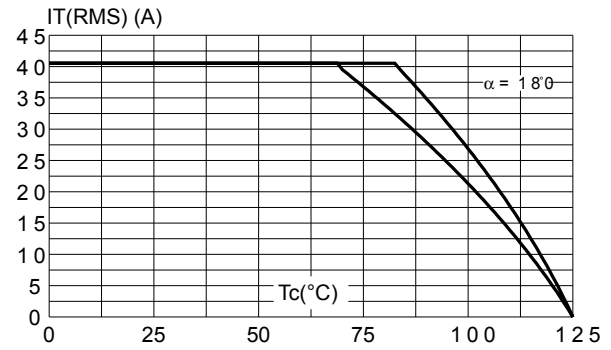


Fig. 4: On-state characteristics (maximum values).

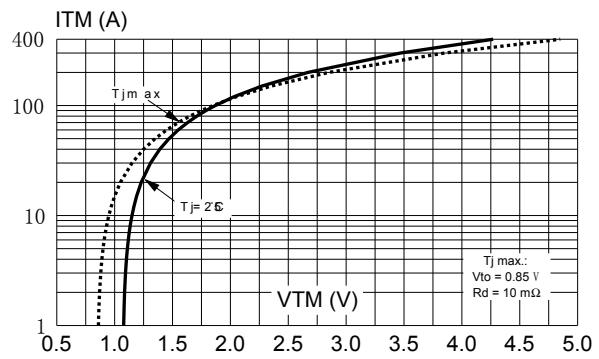


Fig. 6: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10$ ms, and corresponding value of I^2t .

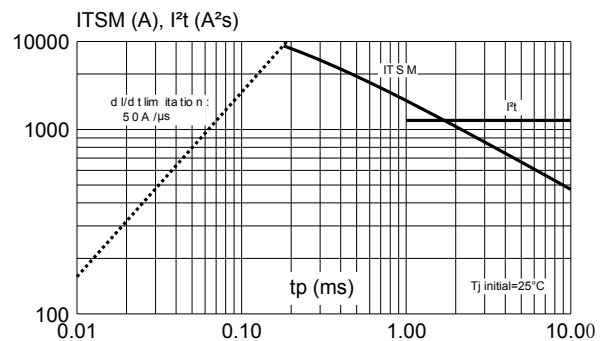


Fig. 7: Relative variation of gate trigger current, holding current and latching current versus junction temperature (typical values).

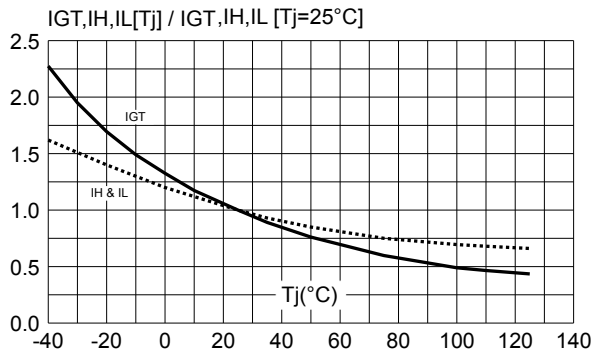


Fig. 8: Relative variation of critical rate of decrease of main current versus (dV/dt)_c (typical values).

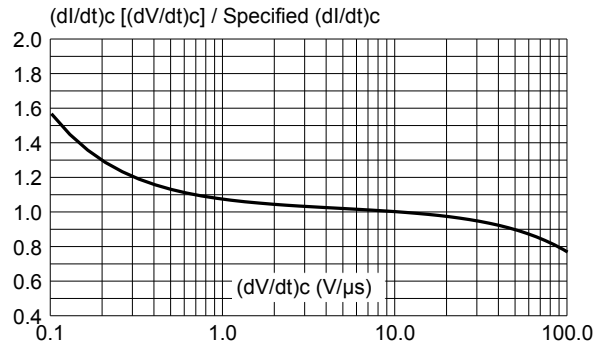
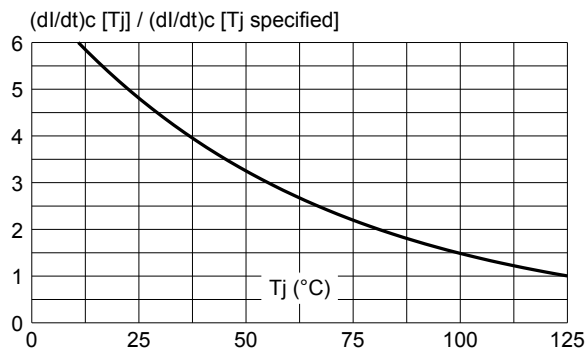


Fig. 9: Relative variation of critical rate of decrease of main current versus junction temperature.



Symbol	Test Conditions		Characteristic Values	Unit
I_R, I_D	$T_{VJ}=T_{VJM}; V_D=V_{DRM}$		10	mA
V_{TM}	$I_T=41A; T_{VJ}=25^{\circ}C$		1.44	V
V_{TO}	For power-loss calculations only ($T_{VJ}=125^{\circ}C$)		0.85	V
r_T			10	$m\Omega$
V_{GT}	I	$V_D=6V; I_T=1A; T_{VJ}=25^{\circ}C$	1.3	V
	II		1.3	
	III		1.3	
	IV		1.5	
I_{GT}	I	$V_D=6V; I_T=1A; T_{VJ}=25^{\circ}C$	50	mA
	II		50	
	III		50	
	IV		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