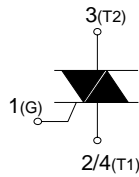
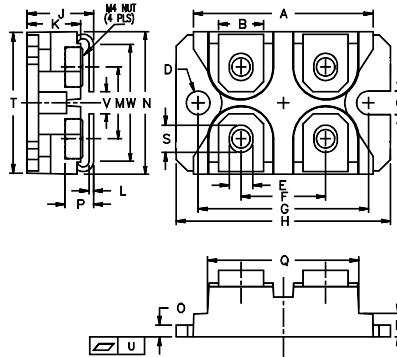


# SBTA71G04S thru SBTA71G12S

## Single Triac Module (Isolated)



Dimensions SOT-227(ISOTOP)



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	31.50	31.88	1.240	1.255
B	7.80	8.20	0.307	0.323
C	4.09	4.29	0.161	0.169
D	4.09	4.29	0.161	0.169
E	4.09	4.29	0.161	0.169
F	14.91	15.11	0.587	0.595
G	30.12	30.30	1.186	1.193
H	37.80	38.20	1.489	1.505
J	11.68	12.22	0.460	0.481
K	8.92	9.60	0.351	0.378
L	0.76	0.84	0.030	0.033
M	12.60	12.85	0.496	0.506
N	25.15	25.42	0.990	1.001
O	1.98	2.13	0.078	0.084
P	4.95	5.97	0.195	0.235
Q	26.54	26.90	1.045	1.059
R	3.94	4.42	0.155	0.174
S	4.72	4.85	0.186	0.191
T	24.59	25.07	0.968	0.987
U	-0.05	0.1	-0.002	0.004
V	3.30	4.57	0.130	0.180
W	0.760	0.830	19.81	21.08

	V <sub>DRM</sub> V	V <sub>DSM</sub> V
<b>SBTA71G04S</b>	400	450
<b>SBTA71G06S</b>	600	650
<b>SBTA71G10S</b>	1000	1100
<b>SBTA71G12S</b>	1200	1300

Symbol	Test Conditions	Maximum Ratings	Unit
<b>I<sub>RMS</sub></b>	T <sub>VJ</sub> =58 °C	70	A
<b>I<sub>TSM</sub></b>	T <sub>VJ</sub> =45°C V <sub>R</sub> =0 t=10ms (50Hz), sine t=8.3ms (60Hz), sine	1080 1200	A
	T <sub>VJ</sub> =T <sub>VJM</sub> V <sub>R</sub> =0 t=10ms(50Hz), sine t=8.3ms(60Hz), sine	750 800	
<b>i<sup>2</sup>t</b>	T <sub>VJ</sub> =45°C V <sub>R</sub> =0 t=10ms (50Hz), sine t=8.3ms (60Hz), sine	6000 5500	A <sup>2</sup> s
	T <sub>VJ</sub> =T <sub>VJM</sub> V <sub>R</sub> =0 t=10ms(50Hz), sine t=8.3ms(60Hz), sine	4350 4000	
<b>(di/dt)<sub>cr</sub></b>	T <sub>VJ</sub> =T <sub>VJM</sub> f=50Hz, t <sub>p</sub> =200us V <sub>D</sub> =2/3V <sub>DRM</sub> I <sub>G</sub> =0.3A dig/dt=0.3A/us repetitive, I <sub>T</sub> =40A	50	A/us
	V <sub>D</sub> =2/3V <sub>DRM</sub> I <sub>G</sub> =0.3A dig/dt=0.3A/us non repetitive, I <sub>T</sub> =I <sub>TAVM</sub>	300	
<b>(dv/dt)<sub>cr</sub></b>	T <sub>VJ</sub> =T <sub>VJM</sub> ; R <sub>GK</sub> =∞; method 1 (linear voltage rise) V <sub>D</sub> =2/3V <sub>DRM</sub>	500	V/us
<b>P<sub>GM</sub></b>	T <sub>VJ</sub> =T <sub>VJM</sub> I <sub>T</sub> =I <sub>TAVM</sub> t <sub>p</sub> =30us t <sub>p</sub> =300us	10 5	W
<b>P<sub>GAV</sub></b>		1	W
<b>V<sub>RGM</sub></b>		10	V
<b>T<sub>VJ</sub></b> <b>T<sub>VJM</sub></b> <b>T<sub>stg</sub></b>		-40...+125 125 -40...+125	°C
<b>V<sub>ISOL</sub></b>	50/60Hz, RMS t=1minute, leads-to-tab	2500	V~
<b>M<sub>d</sub></b>	Mounting torque (M4)	1.1...1.5	Nm
<b>Weight</b>		30	g



# SBTA71G04S thru SBTA71G12S

## Single Triac Module (Isolated)

Symbol	Test Conditions	Characteristic Values	Unit
<b>I<sub>R</sub>, I<sub>D</sub></b>	$T_{VJ}=T_{VJM}; V_D=V_{DRM}$	10	mA
<b>V<sub>TM</sub></b>	$I_T=100A; T_{VJ}=25^{\circ}C$	1.55	V
<b>V<sub>TO</sub></b>	For power-loss calculations only ( $T_{VJ}=125^{\circ}C$ )	0.85	V
<b>r<sub>T</sub></b>		11	mΩ
<b>V<sub>GT</sub></b>	I II III IV $V_D=6V; I_T=1A; T_{VJ}=25^{\circ}C$	1.3	V
		1.3	
		1.3	
		1.5	
<b>I<sub>GT</sub></b>	I II III IV $V_D=6V; I_T=1A; T_{VJ}=25^{\circ}C$	50	mA
		50	
		50	
		100	
<b>V<sub>GD</sub></b>	$T_{VJ}=T_{VJM}; V_D=2/3V_{DRM}$	0.2	V
<b>I<sub>GD</sub></b>		10	mA
<b>I<sub>H</sub></b>	$T_{VJ}=25^{\circ}C; V_D=6V; R_{GK}=\infty$	100	mA
<b>R<sub>thJC</sub></b>	DC current	0.2	K/W
<b>R<sub>thJH</sub></b>	DC current	0.1	K/W
<b>a</b>	Max. acceleration, 50 Hz	50	m/s <sup>2</sup>

**Sirectifier**<sup>®</sup>

# SBTA71G04S thru SBTA71G12S

## Single Triac Module (Isolated)

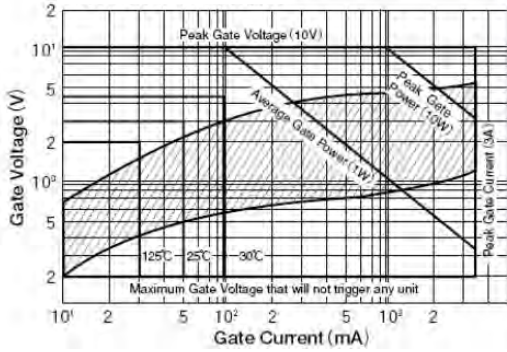


Fig. 1 Gate Characteristics

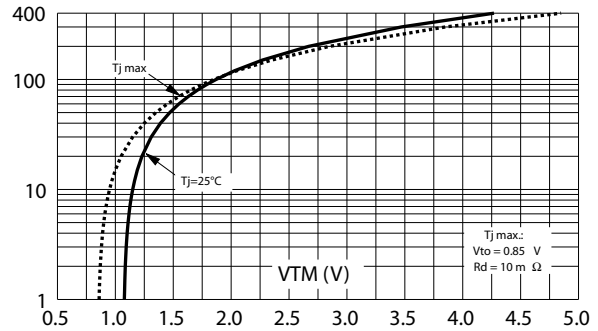


Fig. 2 On-state characteristics

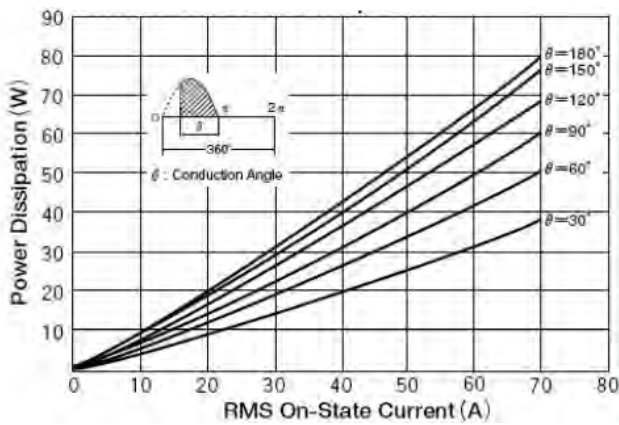


Fig. 3 On-state Current vs. Maximum Power Dissipation

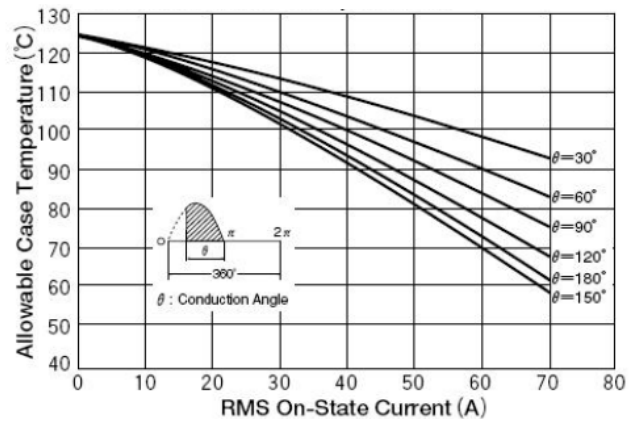


Fig. 4 On-state Current vs. Allowable Case Temperature

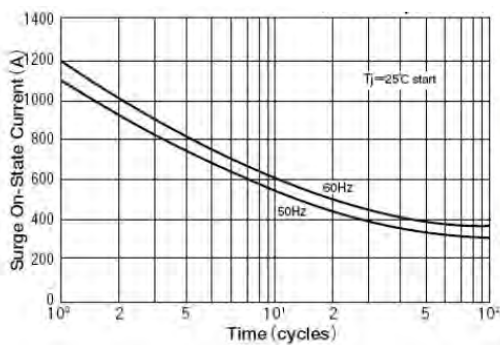


Fig. 5 Surge On-state Current Rating (Non-Repetitive)

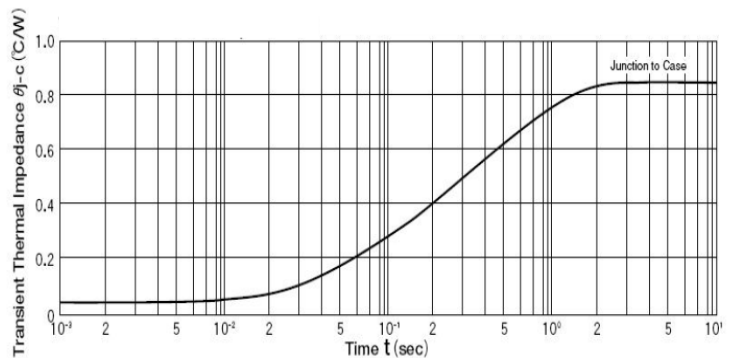


Fig. 6 Transient Thermal Impedance

