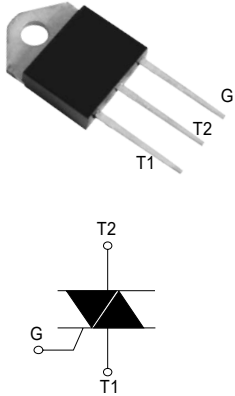


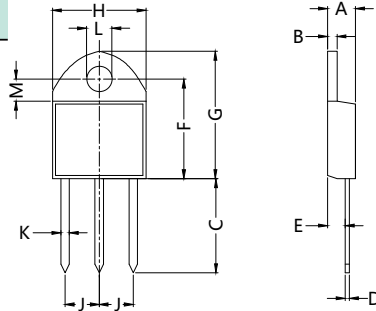
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Discrete Triacs(Isolated)



	V _{DRM/RRM}	V _{DSM/RSM}
	V	V
BTA41-200	200	300
BTA41-400	400	500
BTA41-600	600	700
BTA41-700	700	800
BTA41-800	800	900
BTA41-1000	1000	1100
BTA41-1200	1200	1300
BTA41-1400	1400	1500
BTA41-1600	1600	1700

Dimensions TO-218



Dim.	Millimeter	
	Min.	Max.
A	4.40	4.70
B	1.45	1.65
C	14.50	16.10
D	0.45	0.80
E	2.60	2.95
F	15.80	17.00
G	20.10	21.20
H	15.00	15.80
J	5.30	5.75
K	1.25	1.55
∅L	4.00	4.25
M	3.45	3.75



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter			Value	Unit
I _{T(RMS)}	RMS on-state current (full sine wave)	TO-218	T _c = 80°C	40	A
I _{TSM}	Non repetitive surge peak on-state current(full cycle, T _j initial=25°C)	F=60Hz	t=16.7ms	400	A
		F=50Hz	t=20ms	420	
I ² t	I ² t Value for fusing	tp=10ms		880	A ² s
di/dt	Critical rate of rise of on-state current I _G =2xI _{GT} , tr≤100ns	F=120Hz	T _j =125°C	150	A/μs
V _{DSM} /V _{RSM}	Non repetitive surge peak off-state voltage	tp=10ms	T _j =25°C	V _{DRM} /V _{RRM} + 100	V
I _{GM}	Peak gate current	tp=20μs	T _j =125°C	8	A
P _{G(AV)}	Average gate power dissipation	T _j =125°C		1	W
T _{stg} T _j	Storage junction temperature range Operating junction temperature range			- 40to+150 - 40to+125	°C

ELECTRICAL CHARACTERISTICS (T_j = 25°C, unless otherwise specified)

Symbol	Test Conditions	Quadrant		Value	Unit
I _{GT}	V _D =12V R _L =33Ω	I - II - III IV	MAX.	5 - 100 10 - 150	mA
V _{GT}		ALL		1.3-2.5	
V _{GD}	V _D =V _{DRM} R _L =3.3 kΩ T _j =125°C	ALL	MIN.	0.2	V
I _H	I _T =500mA		MAX.	80	mA
I _L	I _G =1.2I _{GT}	I - III-IV	MAX.	70	mA
		II		160	
dv/dt	V _D =2/3 V _{DRM} gate open T _j =125°C		MIN.	500	V/μs
(di/dt) _c	Without snubber T _j =125°C		MIN.	10	A/ms
V _{ISO}	1min				>2500VAC



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STATIC CHARACTERISTICS

Symbol	Test Conditions			Value	Unit
V_{TM}	$I_{TM}=40A$ $t_p=380\mu s$	$T_j=25^\circ C$	MAX.	1.44	V
V_{To}	Threshold voltage	$T_j=125^\circ C$	MAX.	0.85	V
R_d	Dynamic resistance	$T_j=125^\circ C$	MAX.	10	m Ω
I_{DRM}	$V_{DRM} = V_{RRM}$	$T_j=25^\circ C$	MAX.	5	μA
I_{RRM}		$T_j=125^\circ C$		5	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	Junction to case (AC)	1.3	$^\circ C/W$
$R_{th(j-a)}$	Junction to ambient	50	$^\circ C/W$

PRODUCT SELECTOR

Part Number	Voltage (xxx)		IGT Max (mA)				VGT Max V	Package
	200 V	~ 1600 V	Q1	Q2	Q3	Q4		
BTA41-xxxA	X	X	100	100	100	150	2.50	TO-218
BTA41-xxxB	X	X	50	50	50	100	2.50	TO-218
BTA41-xxxC	X	X	25	25	25	50	2.50	TO-218
BTA41-xxxD	X	X	5	5	5	10	2.50	TO-218
BTA41-xxxE	X	X	10	10	10	25	2.50	TO-218
BTA41-xxxAW	X	X	100	100	100	X	2.50	TO-218
BTA41-xxxBW	X	X	50	50	50	X	2.50	TO-218
BTA41-xxxCW	X	X	35	35	35	X	2.50	TO-218
BTA41-xxxSW	X	X	10	10	10	X	2.50	TO-218
BTA41-xxxTW	X	X	5	5	5	X	2.50	TO-218

OTHER INFORMATION

Part Number	Marking	Weight	Base quantity	Packing mode
BTA41-xxxxx	BTA41-xxxxx	6 g	120	Bulk



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Discrete Triacs(Isolated)

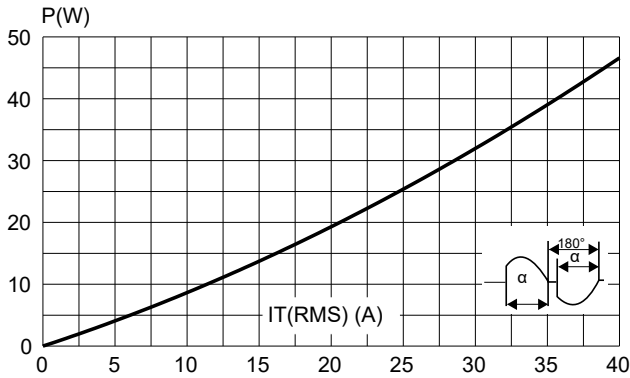


Fig.1: Maximum power dissipation versus RMS on-state current (full cycle).

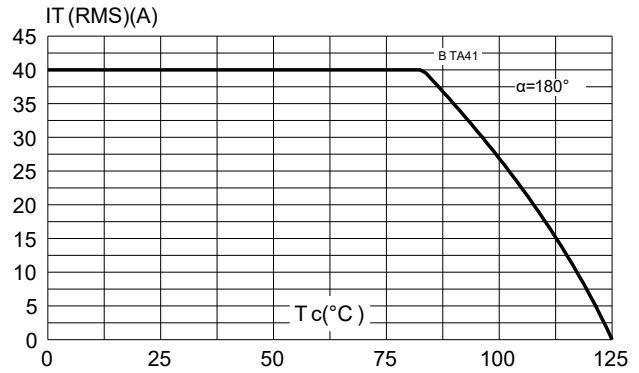


Fig.2: RMS on-state current versus case temperature (full cycle).

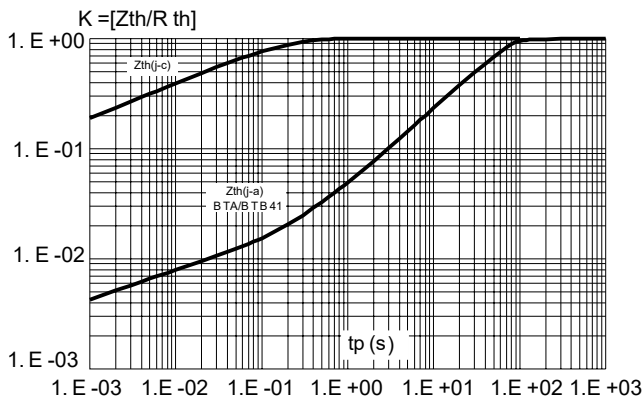


Fig.3: Relative variation of thermal impedance versus pulse duration.

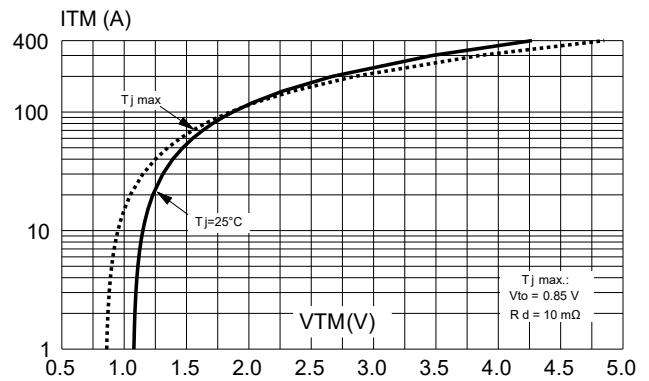


Fig.4: On-state characteristics (maximum values).

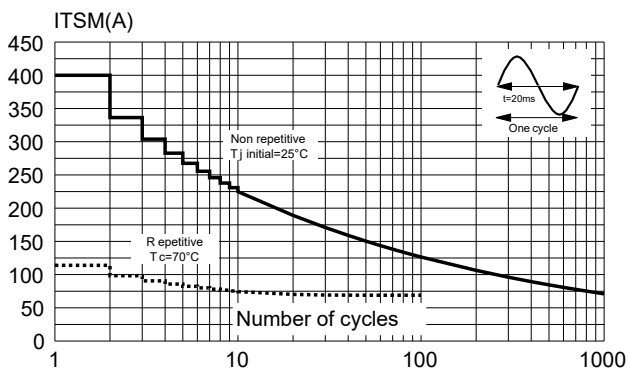


Fig.5: Surge peak on-state current versus number of cycles.

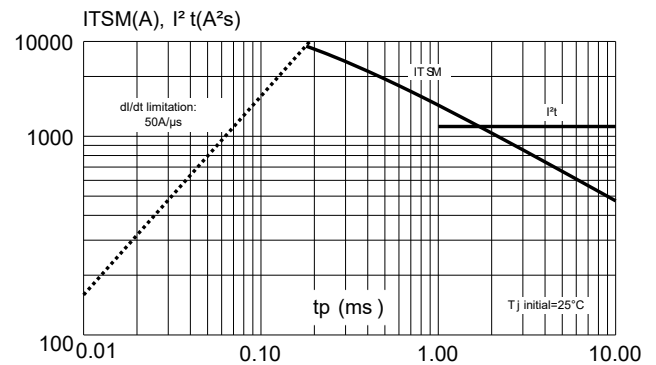


Fig.6: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10\text{ms}$, and corresponding value of I^2t .

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Discrete Triacs(Isolated)

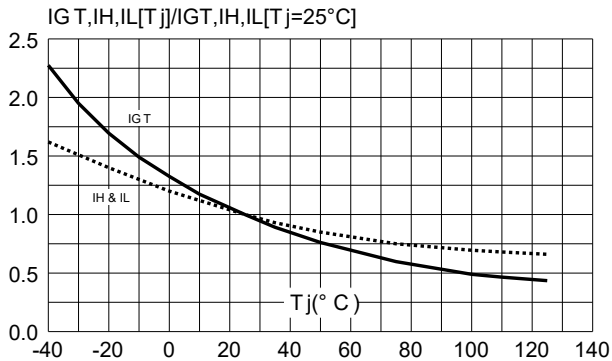


Fig.7: Relative variation of gate trigger current, holding current and latching current versus junction temperature (typical values).

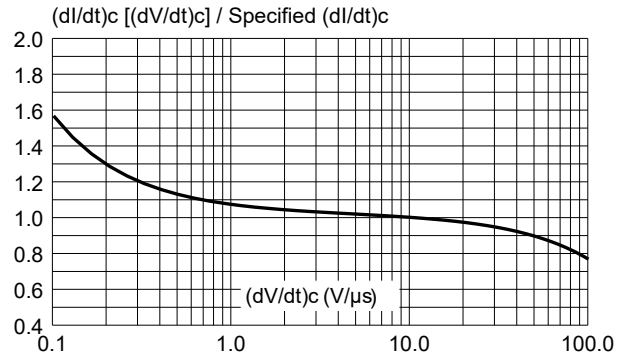


Fig.8: Relative variation of critical rate of decrease of main current versus (dV /dt)c (typical values).

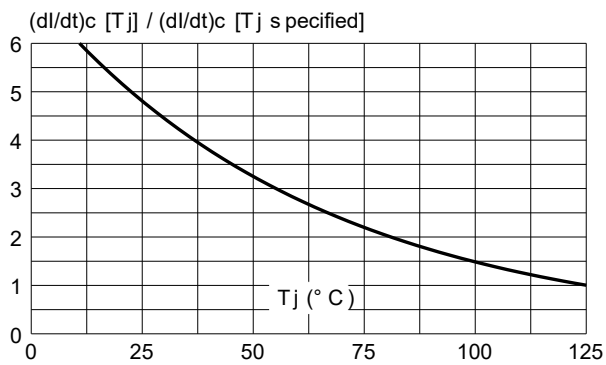


Fig.9: Relative variation of critical rate of decrease of main current versus junction temperature.