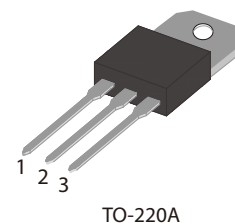


FEATURES

- High current 25 A RMS current Triac
- Low thermal resistance
- High commutation or very high commutation capability
- RoHS (2002/95/EC) compliant packages
- UL-94, V0 flammability package resin compliance



APPLICATIONS

- On/off function in static relays, heating regulation, induction motor starting circuits
- Phase control operations in light dimmers and motor speed controllers



Schematic Symbol

THE MAIN PARAMETERS

Symbol	Parameter	Value(MAX)	Unit
$I_{T(RMS)}$	On state RMS current	25	A
V_{DRM} / V_{RRM}	Off-state repetitive peak voltage	800	V
V_{TM}	Conduction voltage drop	1.55	V

THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	Junction to case(AC)	TO-220A	1.7	°C/W
$R_{th(j-a)}$	Junction to ambient		60	

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Repetitive peak off-state voltage ($T_j=25^{\circ}\text{C}$)	$V_{\text{DRM}}/V_{\text{RRM}}$	800	V
RMS on-state current ($T_c=85^{\circ}\text{C}$)	$I_{\text{T(RMS)}}$	25	A
Non repetitive surge peak on-state current ($t_p=20\text{ms}$)	I_{TSM}	250	
I^2t value for fusing ($t_p=10\text{ms}$)	I^2t	340	A^2S
Critical rate of rise of on-state current ($I_G=2I_{\text{GT}}$, $t_r \leq 100\text{ns}$, $F=120\text{Hz}$, $T_j=125^{\circ}\text{C}$)	I - II - III di_T/dt	50	$\text{A}/\mu\text{s}$
Peak gate current ($t_p=20\mu\text{s}$, $T_j=125^{\circ}\text{C}$)	I_{GM}	4	A
Peak gate power ($t_p=20\mu\text{s}$, $T_j=125^{\circ}\text{C}$)	P_{GM}	5	W
Average gate power dissipation ($T_j=125^{\circ}\text{C}$)	$P_{\text{G(AV)}}$	1	
Storage junction temperature range	T_{STG}	$-40 \sim +150$	$^{\circ}\text{C}$
Operating junction temperature range	T_j	$-40 \sim +125$	

ELECTRICAL CHARACTERISTICS ($T_j=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Test Condition	Quadrant	Value	Unit
I_{GT}	$V_D=12\text{V}, R_L=33\Omega, T_j=25^{\circ}\text{C}$	I - II - III	≤ 50	mA
V_{GT}			≤ 1.3	V
V_{GD}	$V_D=V_{\text{DRM}}, T_j=125^{\circ}\text{C}$		≥ 0.2	V
I_{H}	$I_T=500\text{mA}$		≤ 50	mA
I_{L}	$I_G=1.2I_{\text{GT}}$	I - III	≤ 60	
		II	≤ 80	
dV_D/dt	$V_D=67\%V_{\text{DRM}}, T_j=125^{\circ}\text{C}$		≥ 500	$\text{V}/\mu\text{s}$
V_{TM}	$I_{\text{TM}}=35\text{A}, t_p=380\mu\text{s}$		≤ 1.55	V
$I_{\text{DRM}}/I_{\text{RRM}}$	$V_D=V_{\text{DRM}}/V_{\text{RRM}}, T_j=125^{\circ}\text{C}$		≤ 5	μA
			≤ 2	mA

PARAMETER CHARACTERISTIC CURVE

FIG.1 Maximum power dissipation versus RMS on-state current

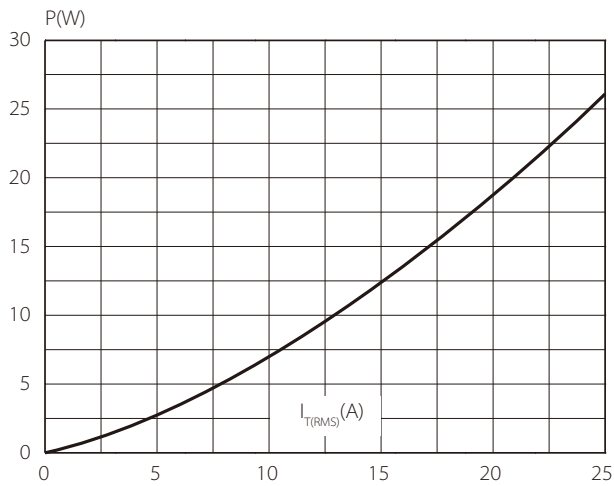


FIG.2 RMS on-state current versus case temperature

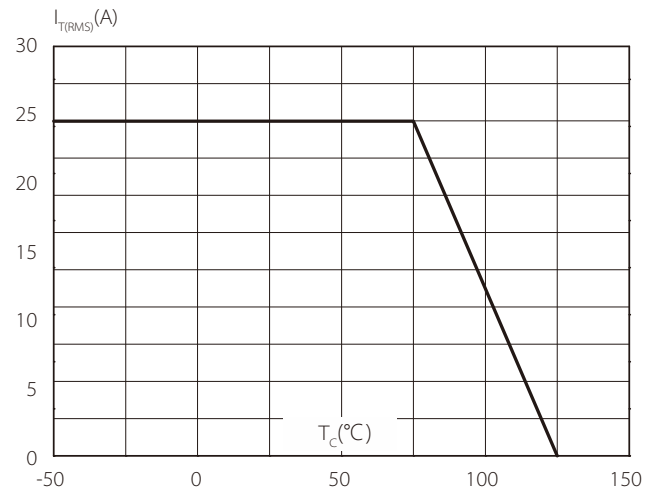


FIG.3 Surge peak on-state current versus number of cycles

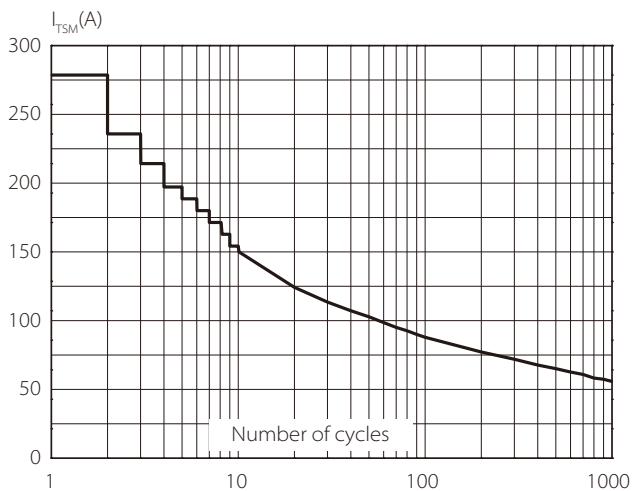


FIG.4 On-state characteristics (maximum values)

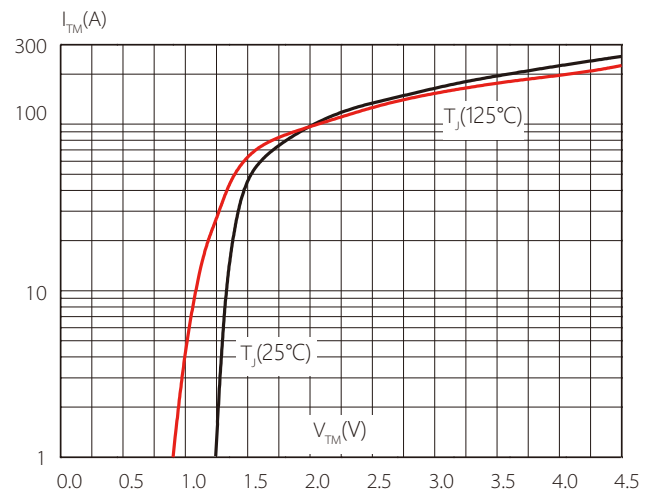


FIG.5 Non-repetitive peak on-state current as a function of pulse width (maximum values)

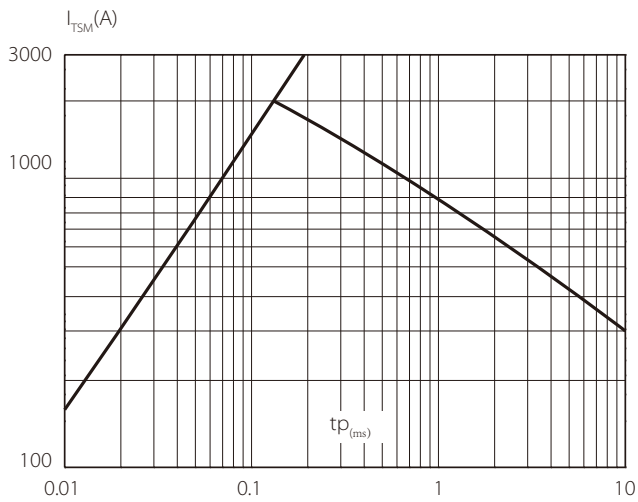


FIG.6 Relative variations of gate trigger current versus junction temperature

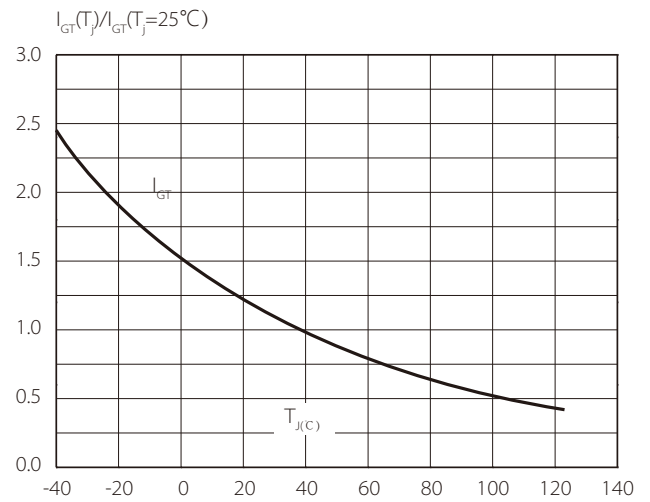


FIG.7 Relative variations of holding current versus junction temperature

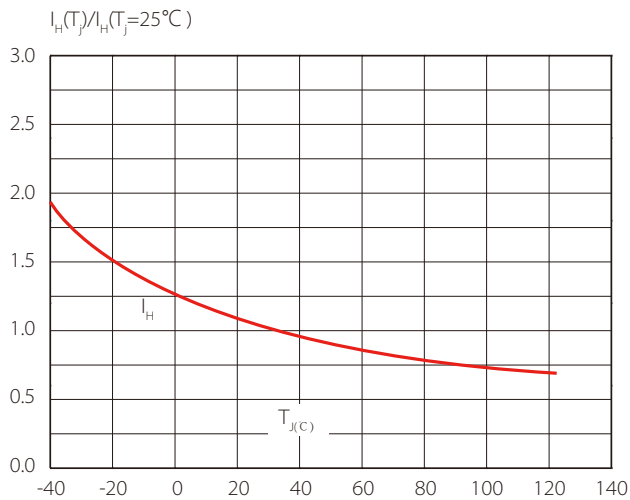
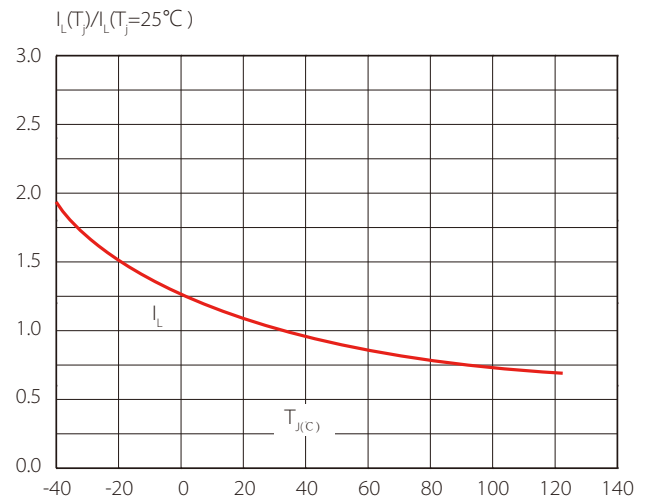
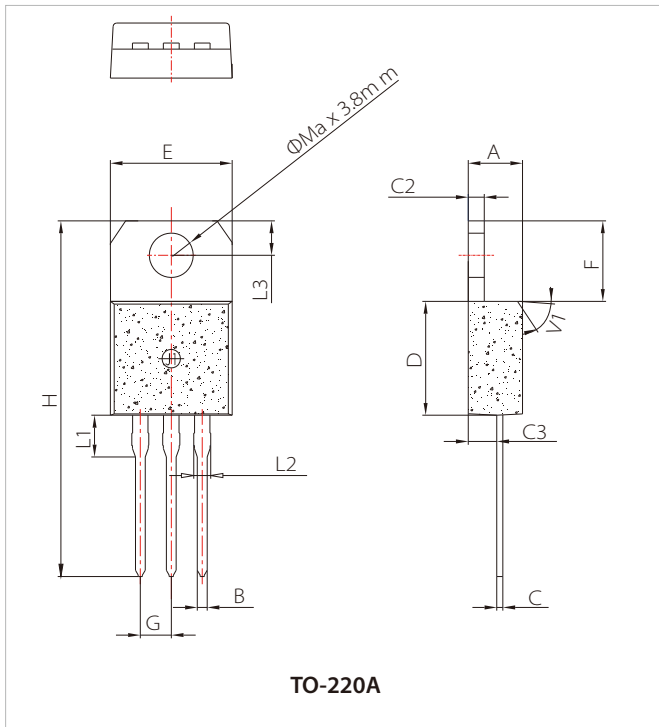


FIG.8 Relative variations of latching current versus junction temperature



PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.61		0.88	0.024		0.035
C	0.46		0.70	0.018		0.028
C2	1.21		1.32	0.048		0.052
C3	2.40		2.72	0.094		0.107
D	8.60		9.70	0.339		0.382
E	9.60		10.4	0.378		0.409
F	6.20		6.60	0.222		0.260
G		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.75			0.148	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116
V1		45°			45°	

ORDERING INFORMATION

Part Number	Component Package	Qty/pcs		
		Tube	Inner Box	Carton
BTA24-800BW	TO-220A	50	1000	5000

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