



T310H 3A TRIACs

Rev.2.0

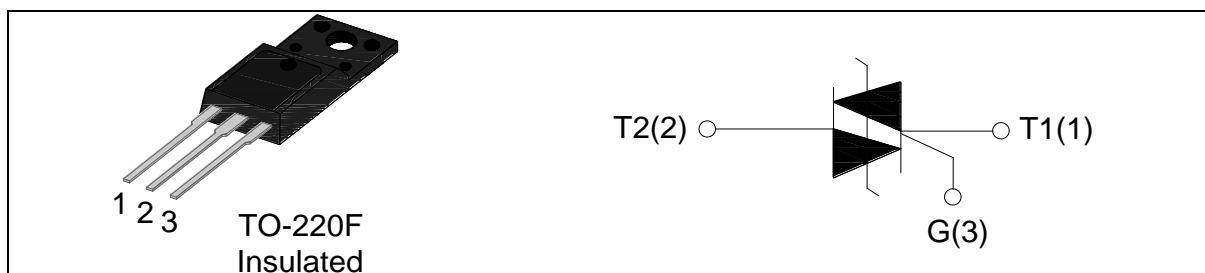
DESCRIPTION:

T310H provide high dv/dt rate with strong resistance to electromagnetic interface. They are especially recommended for use on home appliances such as washing machines, and for use on industrial control systems like electromagnetic valves.

T310H8F provides insulation voltage rated at 2000V RMS from all three terminals to external heatsink complying with UL standards (File ref: E252906).

MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	3	A
I_{GT1-3}	10	mA
V_{DRM}/V_{RRM}	800	V



ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	-40-150	°C
Operating junction temperature range	T_j	-40-125	°C
Repetitive peak off-state voltage($T_j=25^{\circ}C$)	V_{DRM}	800	V
Repetitive peak reverse voltage($T_j=25^{\circ}C$)	V_{RRM}	800	V
Non repetitive surge peak Off-state voltage	V_{DSM}	$V_{DRM} + 100$	V
Non repetitive peak reverse voltage	V_{RSM}	$V_{RRM} + 100$	V
RMS on-state current	TO-220F(Ins) ($T_C=100^{\circ}C$) $I_{T(RMS)}$	3	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)	I_{TSM}	25	A
I^2t value for fusing ($t_p=10ms$)	I^2t	3.1	A^2s
Rate of rise of on-state current ($I_G = 2 \times I_{GT}$)	di/dt	50	$A/\mu s$

Peak gate current	I_{GM}	4	A
Average gate power dissipation	$P_{G(AV)}$	1	W
Peak gate power	P_{GM}	5	W

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

Symbol	Test Condition	Quadrant		Value	Unit
I_{GT}	$V_D=12\text{V } R_L=33\Omega$	I - II -III	MAX	10	mA
V_{GT}		I - II -III	MAX	1.3	V
V_{GD}	$V_D=V_{DRM}$ $T_j=125^\circ\text{C } R_L=3.3\text{K}\Omega$	I - II -III	MIN	0.2	V
I_L	$I_G=1.2I_{GT}$	I -III	MAX	20	mA
		II		40	
I_H	$I_T=100\text{mA}$		MAX	15	mA
dV/dt	$V_D=2/3V_{DRM}$ Gate Open $T_j=125^\circ\text{C}$		MIN	200	V/ μs

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX)	Unit
V_{TM}	$I_{TM}=4.5\text{A } t_p=380\mu\text{s}$	$T_j=25^\circ\text{C}$	1.5	V
I_{DRM}	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25^\circ\text{C}$	5	μA
I_{RRM}		$T_j=125^\circ\text{C}$	1	mA

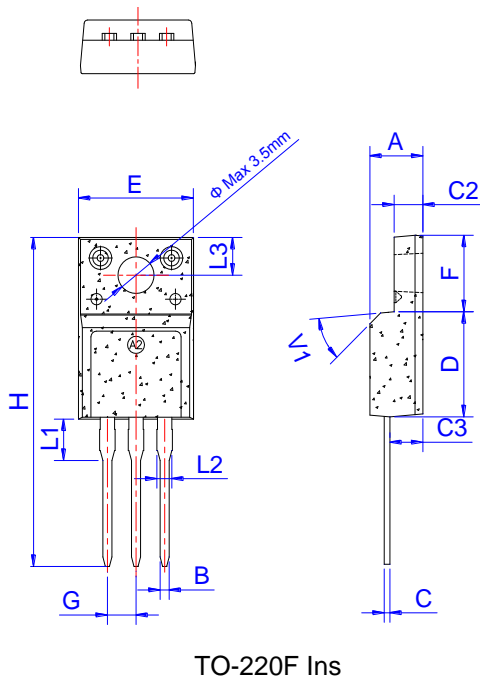
THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	TO-220F(Ins)	7.5	$^\circ\text{C/W}$

ORDERING INFORMATION

T Triacs $I_{T(RMS)}:3\text{A}$ $I_{GT1-3}\leq 10\text{mA}$	3 $I_{GT1-3}\leq 10\text{mA}$	10	H H:High temperature junction	8 $8:V_{DRM}/V_{RRM}\geq 800\text{V}$	F F:TO-220F(Ins)
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PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.50		4.90	0.177		0.193
B	0.74	0.80	0.83	0.029	0.031	0.033
C	0.47		0.65	0.019		0.026
C2	2.45		2.75	0.096		0.108
C3	2.60		3.00	0.102		0.118
D	8.80		9.30	0.346		0.366
E	9.80		10.4	0.386		0.410
F	6.40		6.80	0.252		0.268
G		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.63			0.143	
L2	1.14		1.70	0.045		0.067
L3		3.30			0.130	
V1		45°			45°	

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

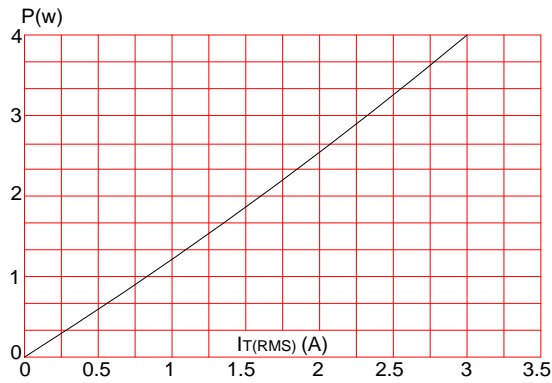


FIG.2: RMS on-state current versus case temperature

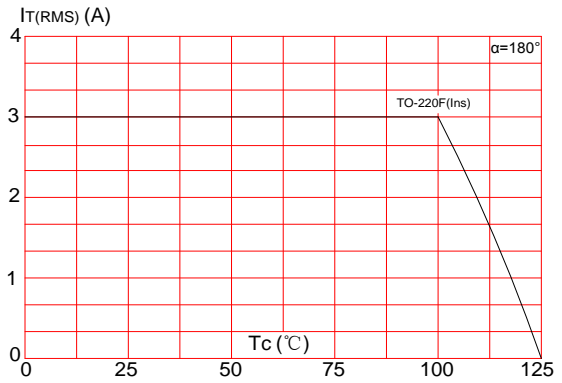


FIG.3: Surge peak on-state current versus number of cycles

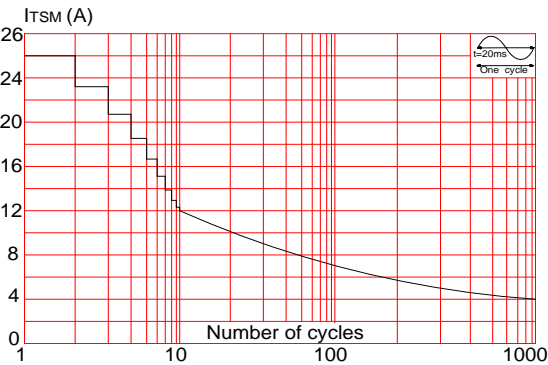


FIG.4: On-state characteristics (maximum values)

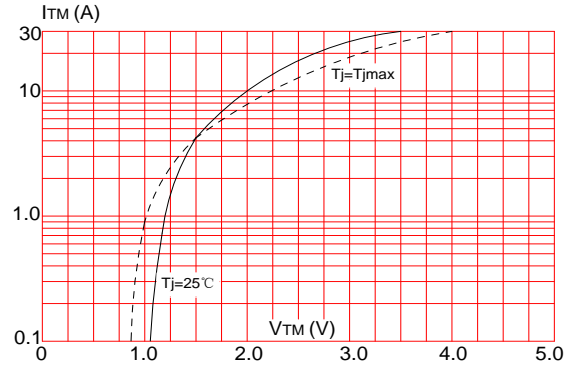


FIG.5: Relative variations of gate trigger current versus junction temperature

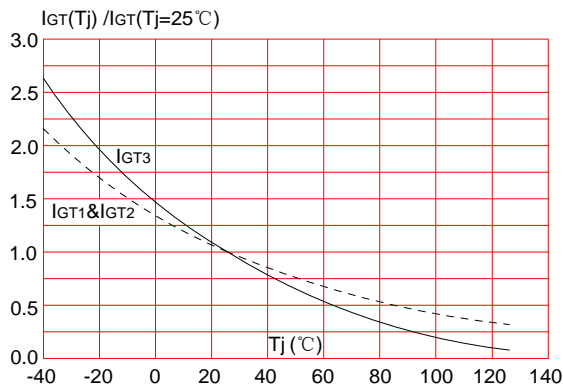
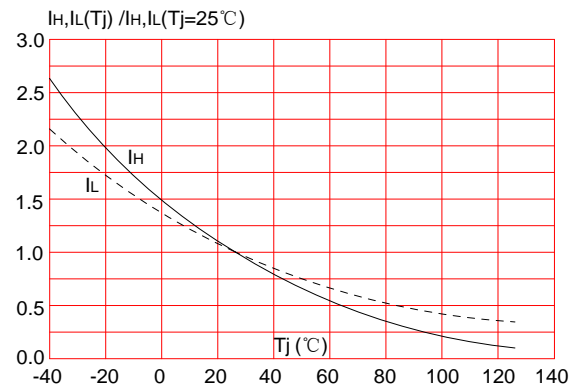



FIG.6: Relative variations of holding current, latching current versus junction temperature



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