



## T310H 3A TRIACs

Rev.1.0

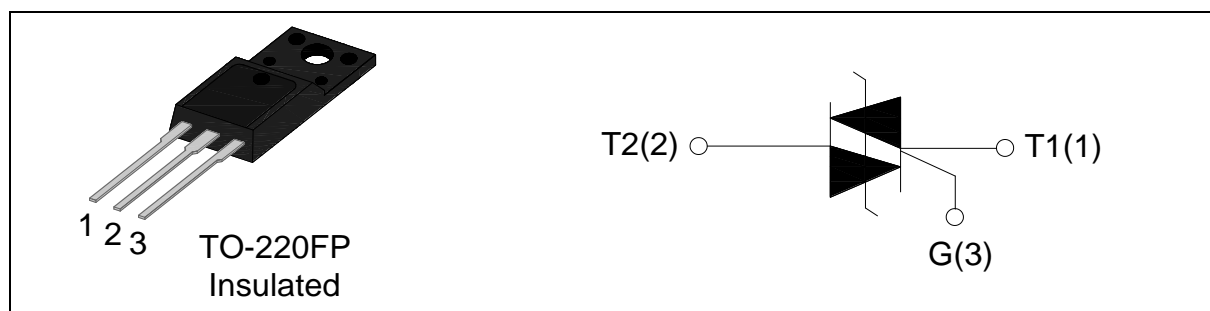
### DESCRIPTION:

T310H provide high junction temperature of 150 °C . 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	$T_j$	-40-150	°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-220FP(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
$V_{GD}$	$V_D = V_{DRM}$ $T_j = 150^\circ\text{C}$ $R_L = 3.3\text{K}\Omega$	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 $T_j = 150^\circ\text{C}$		MIN	200	V/ $\mu$ s

**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	$\mu\text{A}$
$I_{RRM}$		$T_j = 150^\circ\text{C}$	1	mA

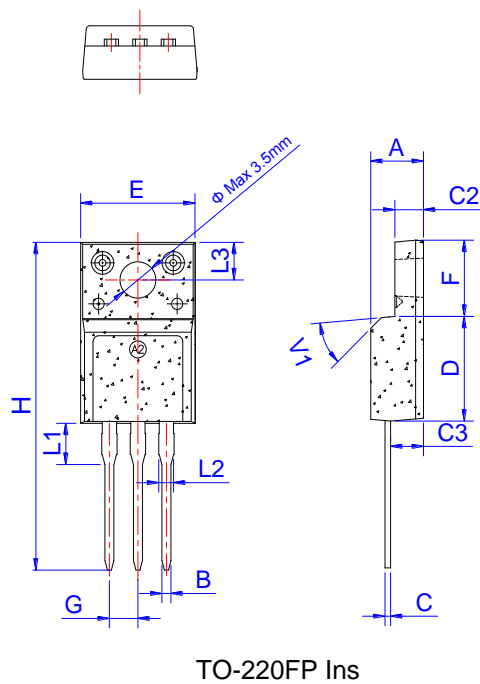
**THERMAL RESISTANCES**

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

ORDERING INFORMATION

<p><b>T</b></p> <p>Triacs</p>	<p><b>3</b></p> <p><math>I_T(RMS):3A</math></p> <p><math>I_{GT1-3} \leq 10mA</math></p>	<p><b>10</b></p>	<p><b>H</b></p> <p><math>H:T_{jmax}=150^{\circ}C</math></p>	<p><b>8</b></p> <p><math>8:V_{DRM}/V_{RRM} \geq 800V</math></p>	<p><b>F</b></p> <p>F:TO-220FP(Ins)</p>
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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

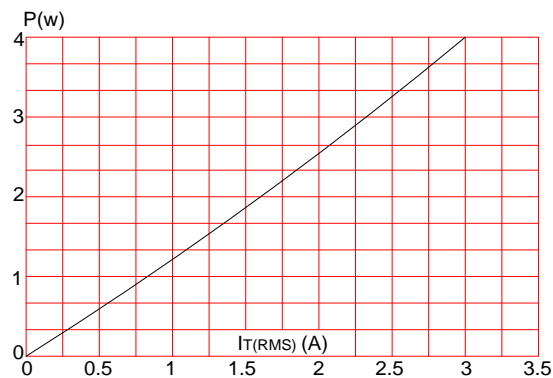
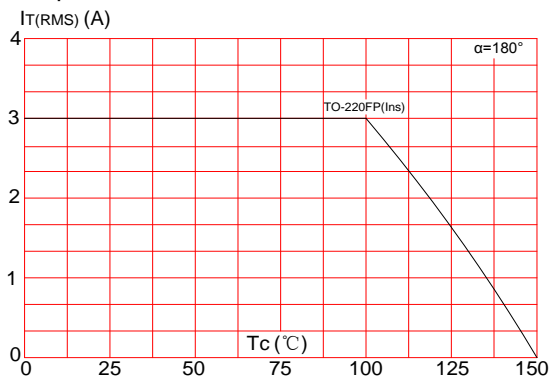
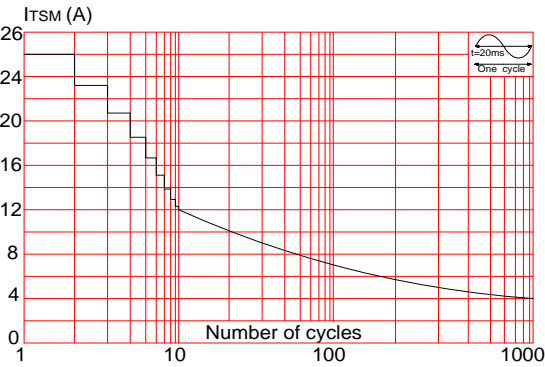


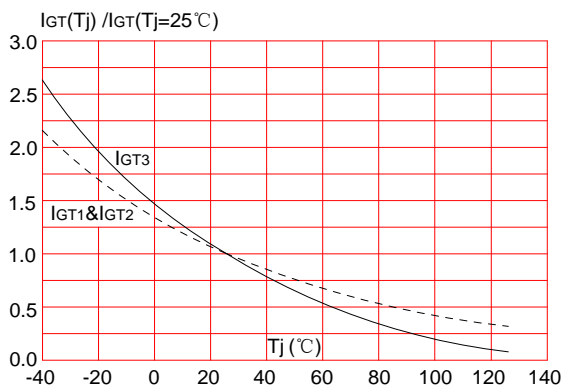
FIG.2: RMS on-state current versus case temperature



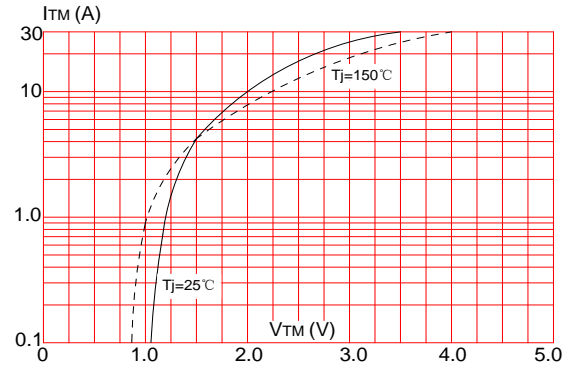
**FIG.3:** Surge peak on-state current versus number of cycles



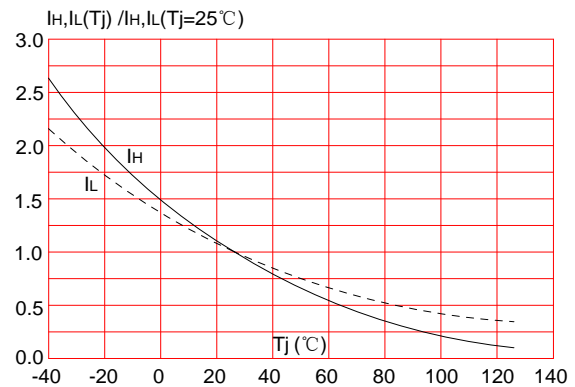
**FIG.5:** Relative variations of gate trigger current versus junction temperature




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



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



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