

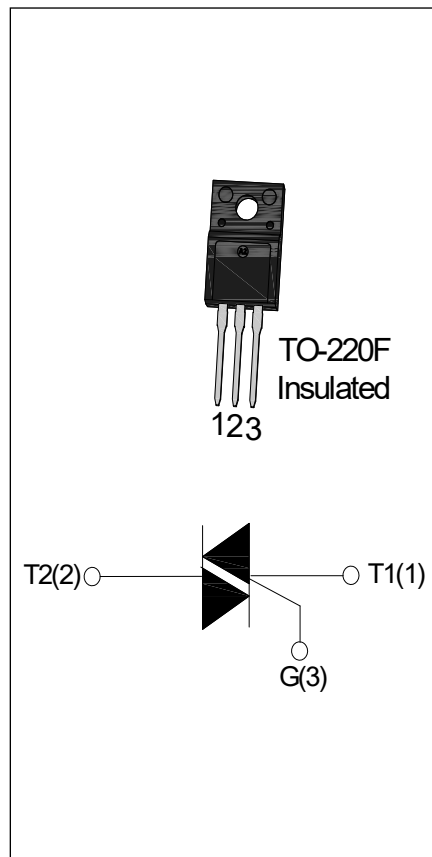


DESCRIPTION:

With high ability to withstand the shock loading of large current, T835H-8F triac of high junction temperature provide high dv/dt rate with strong resistance to electromagnetic interference. especially recommended for use on motor control of laundry machine. From all three terminals to external heatsink, T835H-8F provides a rated insulation voltage of 2000 V_{RMS} , complying with UL standards (File ref: E252906). Package TO-220F is RoHS compliant. (2011/65/EU)

MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	8	A
V_{DRM}/V_{RRM}	800	V
T_{jmax}	150	°C



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 ($T_j=25^\circ\text{C}$)	V_{DRM}	800	V	
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	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) ($T_C=112^\circ\text{C}$)	$I_{T(RMS)}$	8	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)	I_{TSM}	80	A	
I^2t value for fusing ($t_p=10\text{ms}$)	I^2t	32	A^2s	

Critical rate of rise of on-state current ($I_G = 2 \times I_{GT}$)	dI/dt	50	A/ μ s
Peak gate current	I_{GM}	4	A
Average gate power dissipation	$P_{G(AV)}$	1	W
Peak gate power	P_{GM}	5	W
Peak pulse voltage ($T_j = 25^\circ\text{C}$; non-repetitive, off-state; FIG.7)	Vpp	4	kV

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	35	mA
V_{GT}		I - II - III	MAX	1.5	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	50	mA
		II		60	
I_H	$I_T = 100\text{mA}$		MAX	40	mA
dv/dt	$V_D = 2/3V_{DRM}$ Gate Open $T_j = 150^\circ\text{C}$		MIN	1000	V/ μ s

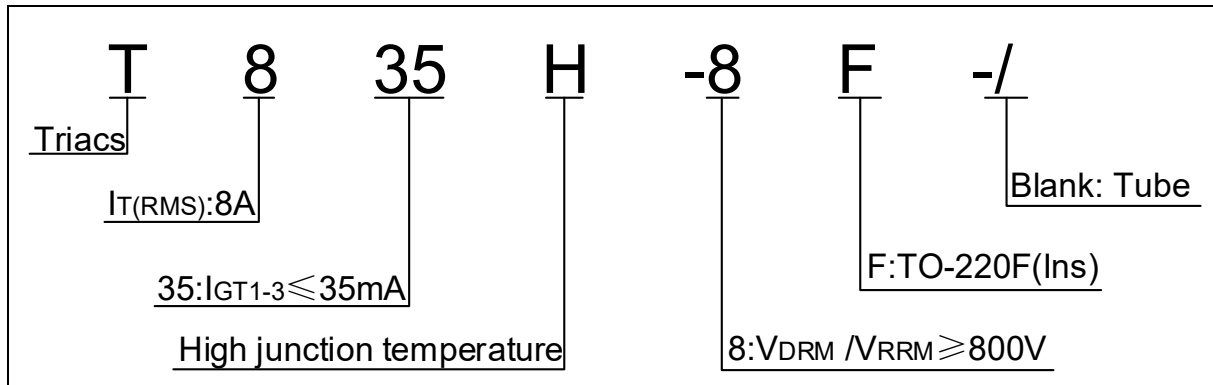
STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX)	Unit
V_{TM}	$I_{TM} = 11\text{A}$ $t_p = 380\mu\text{s}$	$T_j = 25^\circ\text{C}$	1.5	V
V_{TO}	Threshold voltage	$T_j = 150^\circ\text{C}$	0.95	V
R_d	Dynamic resistance	$T_j = 150^\circ\text{C}$	35	m Ω
I_{DRM}	$V_D = V_{DRM}$ $V_R = V_{RRM}$	$T_j = 25^\circ\text{C}$	10	μA
I_{RRM}		$T_j = 150^\circ\text{C}$	5	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case(AC)	3.8	$^\circ\text{C}/\text{W}$

ORDERING INFORMATION



MARKING

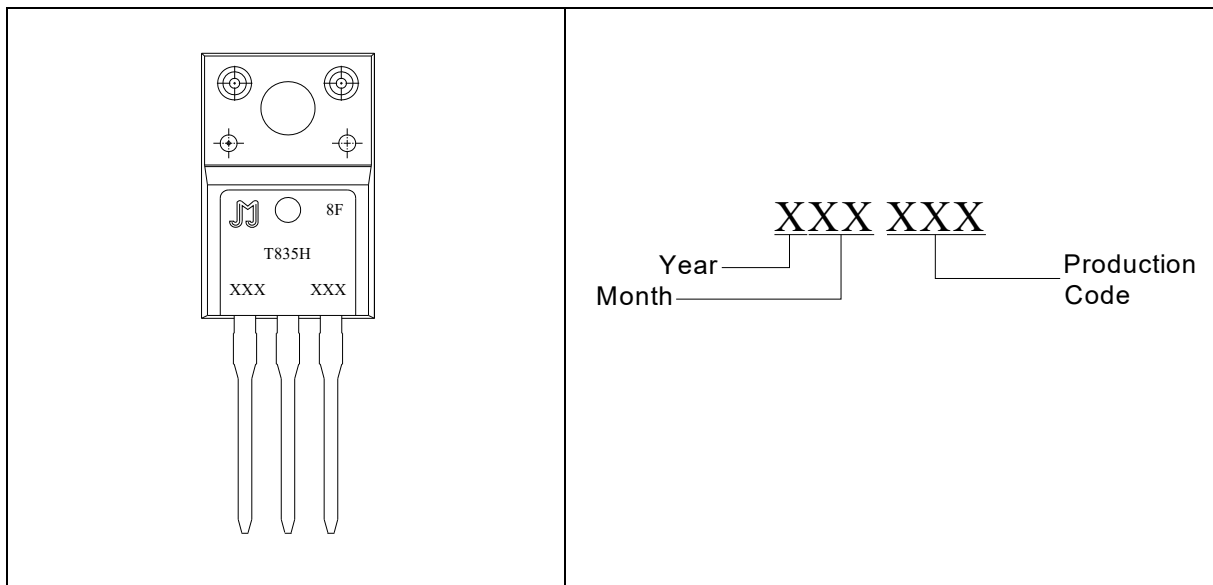


FIG.1 Maximum power dissipation versus RMS on-state current

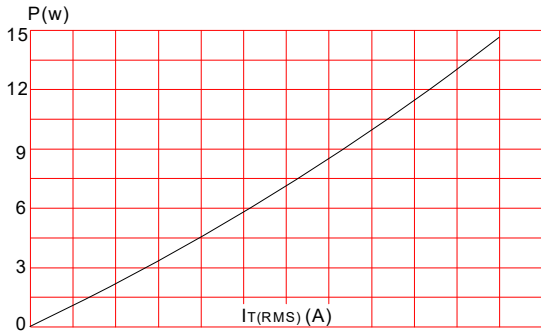


FIG.2: RMS on-state current versus case temperature

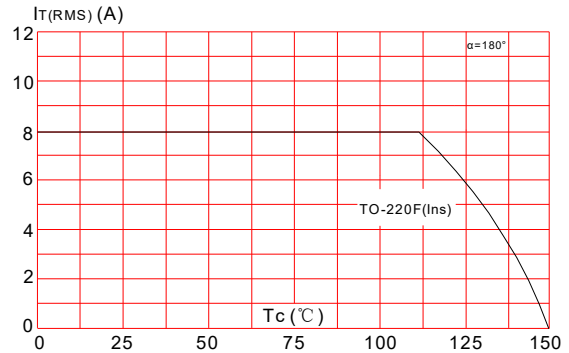


FIG.3: Surge peak on-state current versus number of cycles

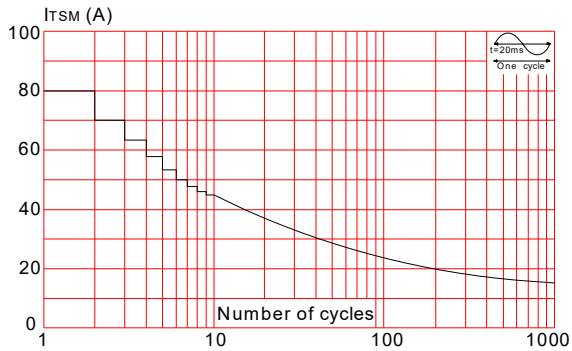


FIG.4: On-state characteristics (maximum values)

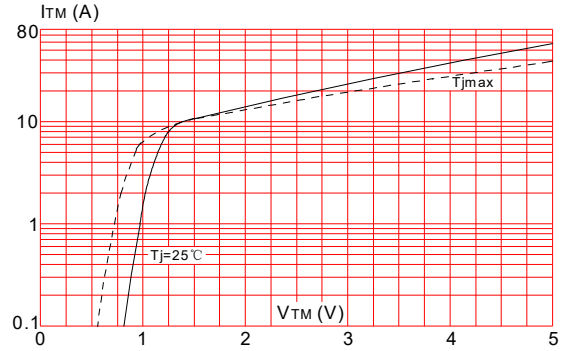


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20\text{ms}$, and corresponding value of $I^2 t$ ($dI/dt < 50\text{A}/\mu\text{s}$)

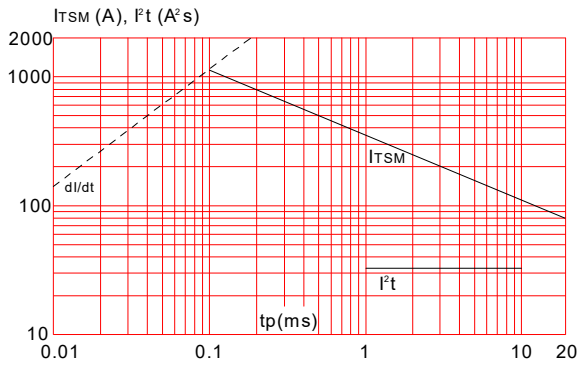


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature

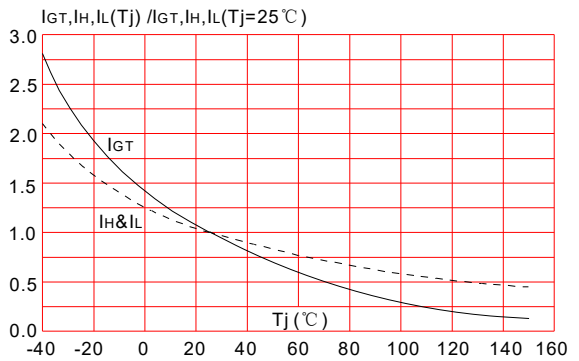
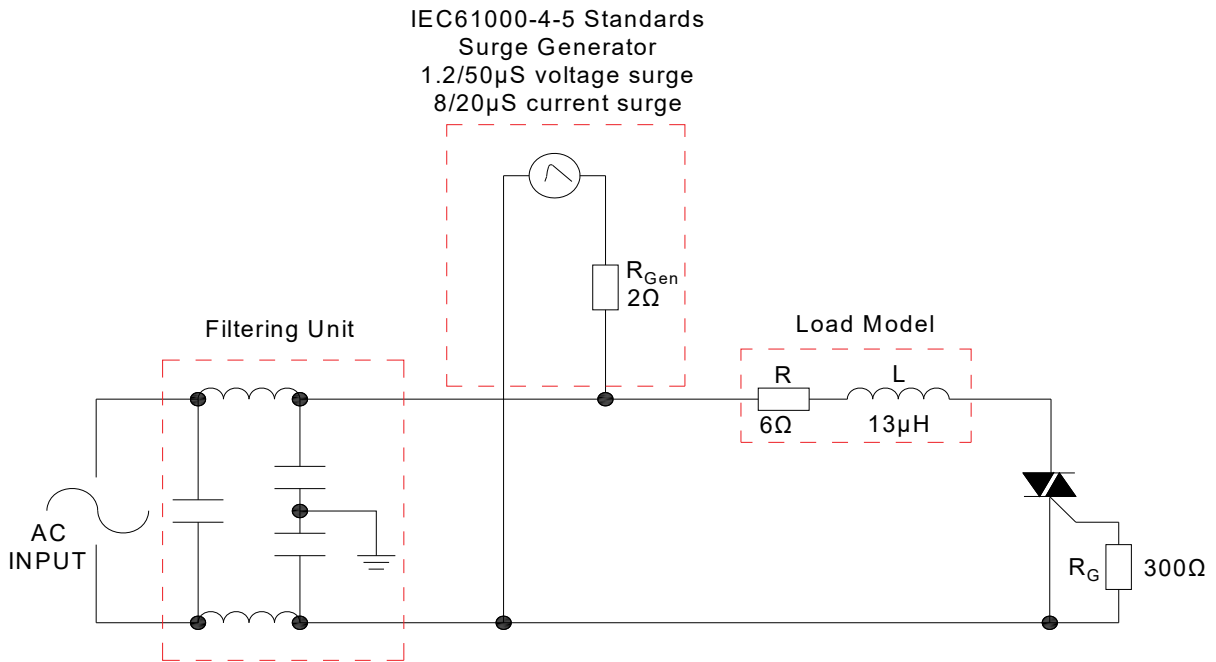


FIG.7: Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



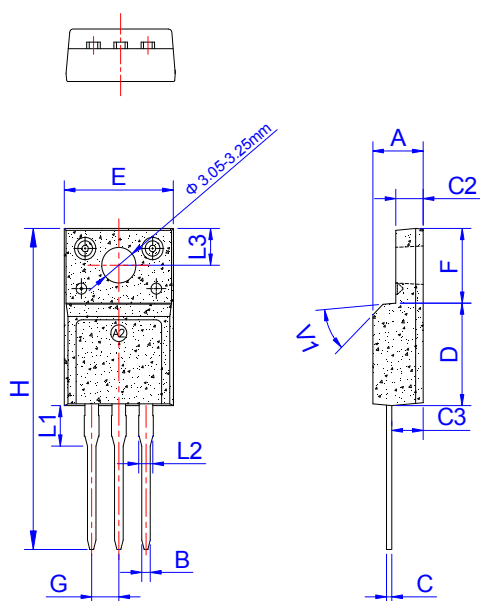
ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
T835H-8F	800	35	TO-220F(Ins)	50	Tube

Document Revision History

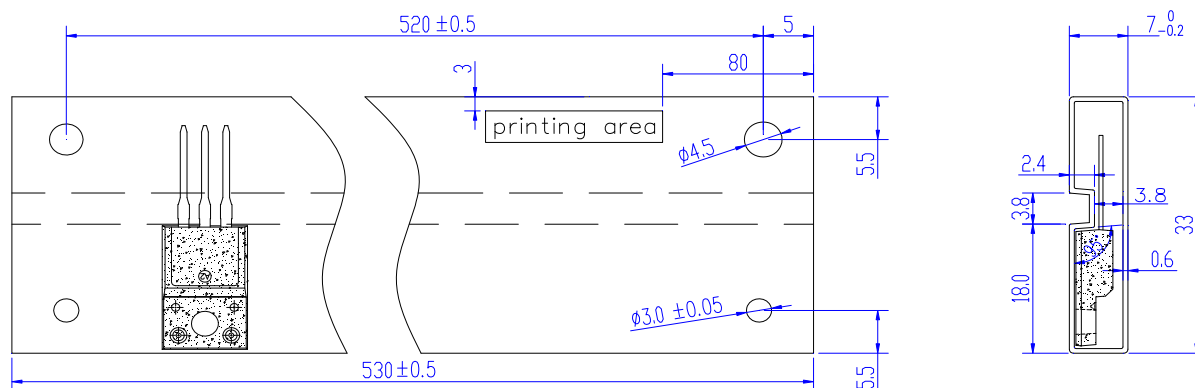
Date	Revision	Changes
Mar 27, 2022	1	Last update

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	2.40		2.70	0.094		0.106
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°	


DELIVERY MODE



PACKAGE	OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON
TO-220F	TUBE	50	1,000	5,000



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