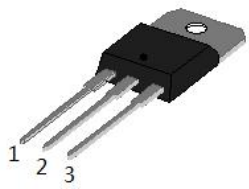
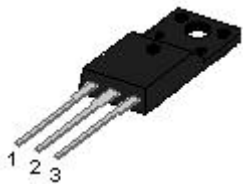
Technical Data
Data Sheet N2186, Rev.A

RoHS

T1635H8A T1635H8F 16A TRIACs

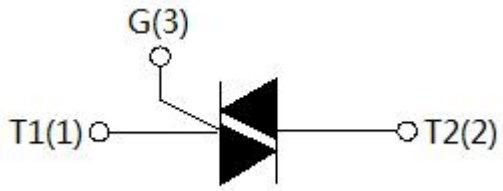


TO-220A(Ins)



TO-220F(Ins)

Circuit Diagram



Description

T1635H8A series triacs of high junction temperature with high dv/dt rate with strong resistance to electromagnetic interference provide high ability to withstand the shock loading of large current. They are especially recommended for use on inductive load and high environment temperature condition.

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Storage junction temperature range	T_{stg}	-	-40-150	℃
Operating junction temperature range	T_j	-	-40-150	℃
Repetitive peak off-state voltage(T_j=25℃)	V_{DRM}	-	800	V
Repetitive peak reverse voltage(T_j=25℃)	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	$I_{(TRMS)}$	TO-220A(Ins) (TC=100℃) TO-220F(Ins) (TC=100℃)	16	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)	I_{TSM}	-	160	A
I^2t value for fusing (tp=10ms)	I^2t	-	144	A^2s
Critical rate of rise of on-state current (I_G=2×I_{GT})	dI/dt	-	50	A/μs
Peak gate current	I_{GM}	-	4	A
Average gate power dissipation	$P_{G(AV)}$	-	1	W
Peak gate power	P_{GM}	-	5	W

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Electrical Characteristics(Tj=25℃ unless otherwise specified)

Symbol	Test Condition	Quadrant		Value	Unit
I_{GT}	V_D=12V R_L=33Ω	Ⅰ-Ⅱ-Ⅲ	MAX	35	mA
V_{GT}		Ⅰ-Ⅱ-Ⅲ	MAX	1.5	V
V_{GD}	V_D=V_{DRM} T_j=150℃ R_L=3.3KΩ	Ⅰ-Ⅱ-Ⅲ	MIN	0.2	V
I_L	I_G=1.2I_{GT}	Ⅰ-Ⅲ	MAX	50	mA
		Ⅱ		70	
I_H	I_T=100mA		MAX	45	mA
dV/dt	V_D=2/3V_{DRM} R_{GK}=1KΩ T_j=150℃		MIN	1000	V/μs

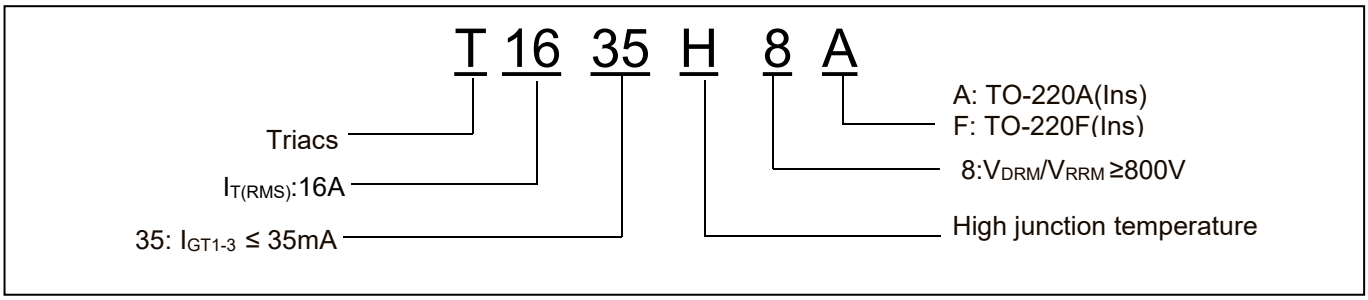
Static Characteristics

Symbol	Parameter		Value(MAX)	Unit
V_{TM}	I_{TM}=22.5A tp=380μs	T_j=25℃	1.4	V
I_{DRM}	V_D=V_{DRM} V_R=V_{RRM}	T_j=25℃	5	μA
I_{RRM}		T_j=150℃	2	mA

Thermal Resistances

Symbol	Condition		Value	Units
Rth(j-c)	Junction to case(AC)	TO-220A(Ins)	2.1	℃/W
		TO-220F(Ins)	2.3	℃/W

Ordering Information



Device	Package	Shipping
T1635H8A	TO-220A(Ins)	50pcs/ Tube
T1635H8F	TO-220F(Ins)	50pcs/ Tube

T1635H8A
T1635H8F

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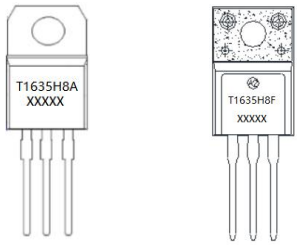
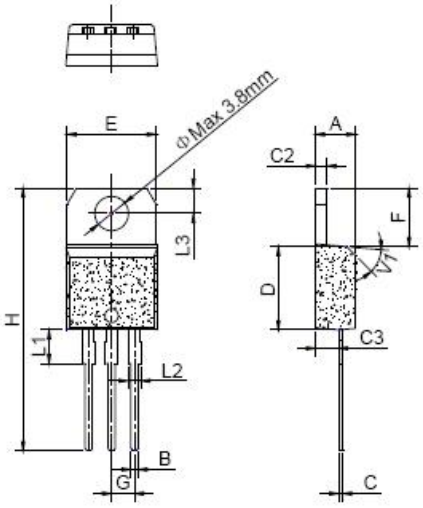
Marking Diagram



Where XXXXX is YYWWL

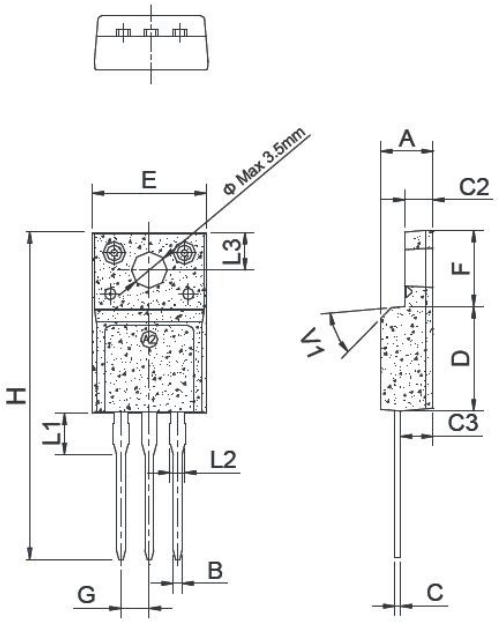
T1635H8A	= Part name
YY	= Year
WW	= Week
L	= Lot Number

Mechanical Dimensions TO-220A(Ins)



SYMBOL	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	6.55		6.95	0.258		0.274
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°	

Mechanical Dimensions TO-220F(Ins)



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°	

Ratings and Characteristics Curves

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

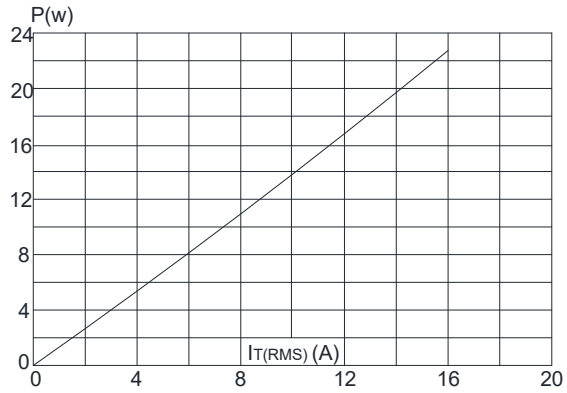


FIG.2: RMS on-state current versus case temperature

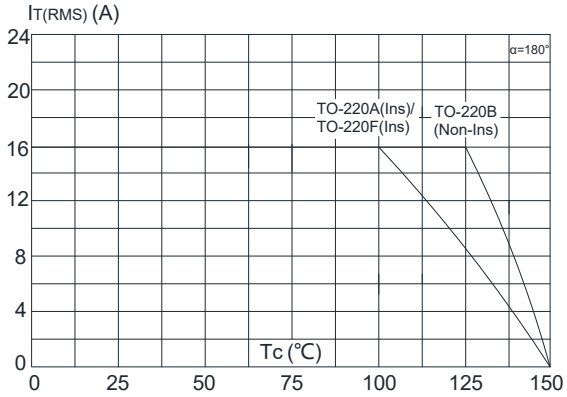


FIG.3: Surge peak on-state current versus number of cycles

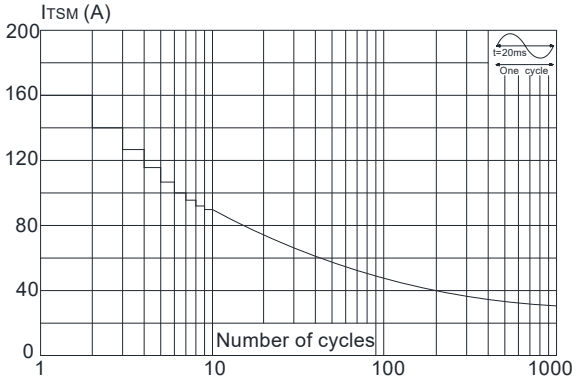


FIG.4: On-state characteristics (maximum values)

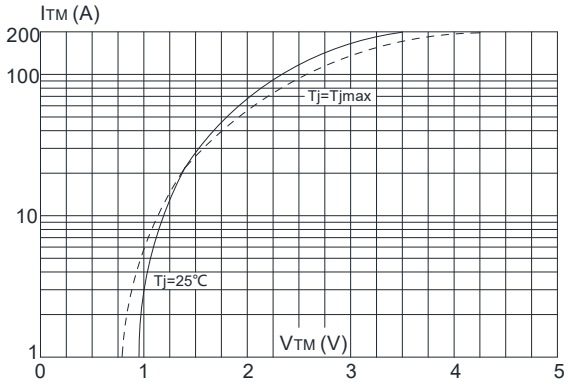


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp<20ms, and corresponging value of I^2t (dI/dt < 50A/μs)

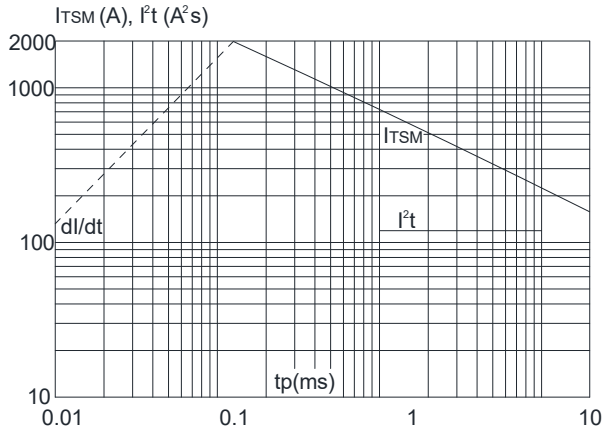
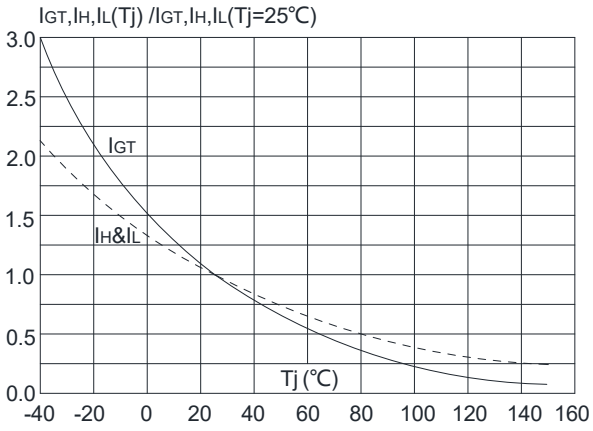


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature



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