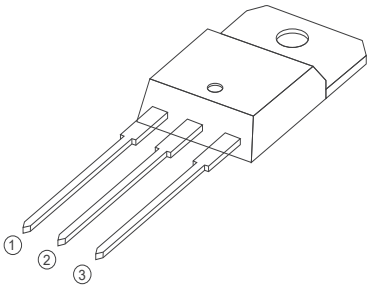
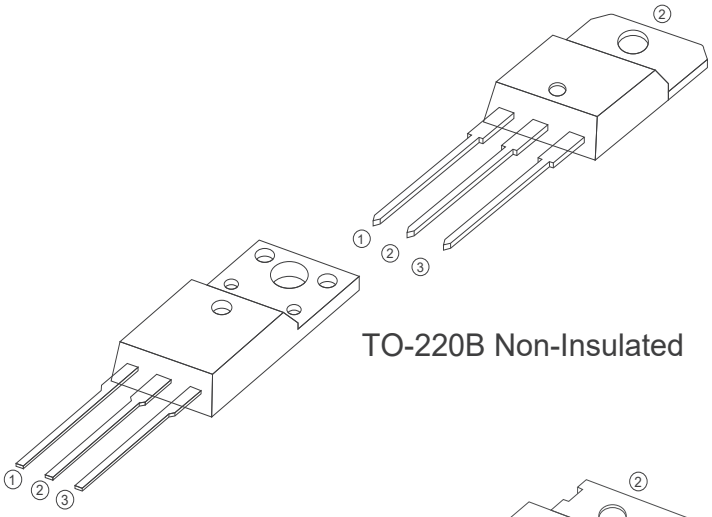
IT(RMS)		25A
VDRM/VRRM	BTA24-800	800V
	BTA24-1200	1200V
VTM		1.55V



TO-220A Insulated

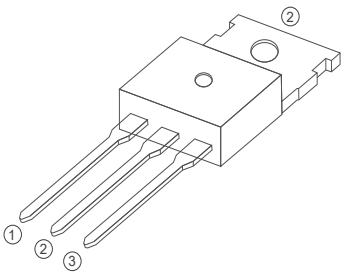
FEATURES

IT(RMS): 25A
VGT: 1.5V
VDRM VRRM:800V-1200V
Medium current Triac



TO-220B Non-Insulated

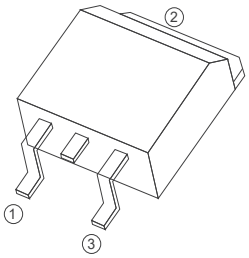
TO-220F Insulated



TO-220C

APPLICATIONS

Heater Control
Motor Speed Controller
Washing machine
Vacuums
Solid state relay



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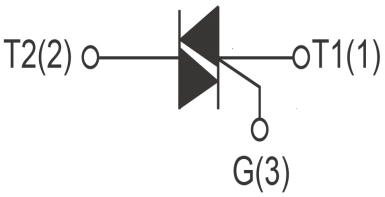


Absolute Maximum Ratings (Tj=25°C unless otherwise specifed)

Symbol	Parameter	Conditions	Ratings	Unit
VDRM VRRM	Repetitive Peak Off-State Voltage	BTA24-800	800	V
		BTA24-1200	1200	V
IT(RMS)	R.M.S On-State Current	Tc=110°C	25	A
ITSM	Surge On-State Current	tp=16.7ms/tp=10ms	280/300	A
I^2t	I^2t for fusing	Tp=10ms	520	A^2s
PG(AV)	Average Gate Power Dissipation	Tj=150°C	1	W
IGM	Peak Gate Current	Tj=150°C	6	A
Tj	Operating Junction Temperature		~40~150	°C
TSTG	Storage Temperature		~40~150	°C

Electrical Characteristics (Tj=25°C unless otherwise specifed)

Symbol	Parameter		Test Conditions	Value				Unit
				SW	CW	BW	B	
IDRM	Repetitive Peak Off-State Current		Tj=25°C	5				uA
			Tj=150°C	3				mA
IRRM	Repetitive Peak Reverse Current		Tj=25°C	5				uA
			Tj=150°C	3				mA
VTM	Forward "on" voltage		IT=35A tp=380us	1.55				V
VGT	Gate trigger voltage		VD=12V ,RL=30Ω	≤1.5				V
di/dt	Critical rate of rise of on-state current	I,II,III	F=120Hz,Tj=150°C IG=2xIGT,tr≤100ns	≥50				A/us
		IV		≥10				A/us
IGT	Gate trigger current	I,II,III	VD=12V RL=30Ω	≤10	≤35	≤50	≤50	mA
		IV			/	/	≤100	mA
IH	Holding current		IT=0.2A	≤40	≤60	≤80	≤80	mA
VDG	Gate non-trigger voltage	ALL	VD=VDRM TJ=150°C	≥0.2				V
dv/dt	Critical-rate of rise of commutation voltage		TJ=150°C VD=2/3VDRM Gate open circuit	≥200	≥400	≥1000	≥500	V/us

FIG1

Maximum power dissipation versus RMS on-state current

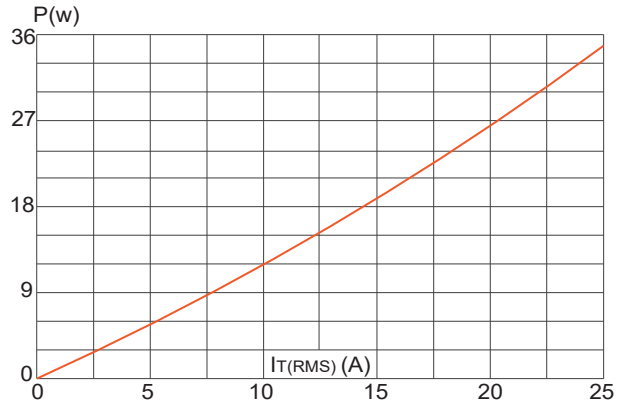


FIG2

RMS on-state current versus case temperature

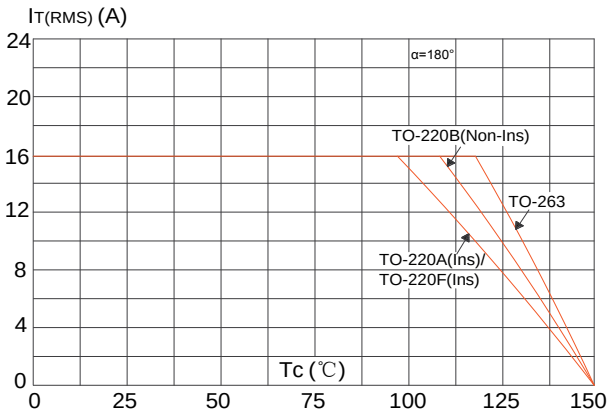


FIG3

Surge peak on-state current versus number of cycles

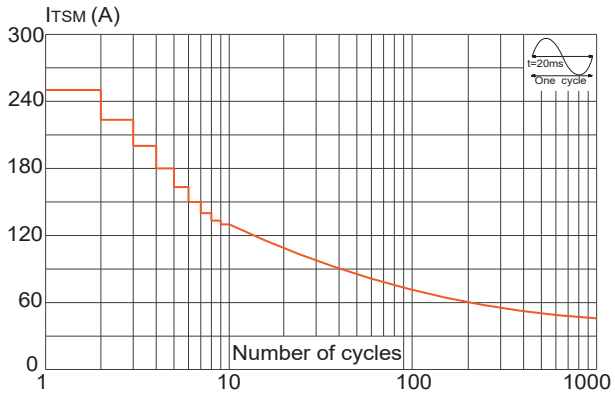


FIG4

On-state characteristics (maximum values)

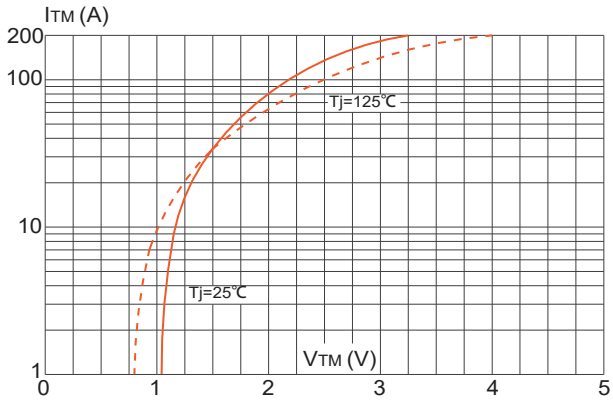


FIG5

Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp<20ms, and

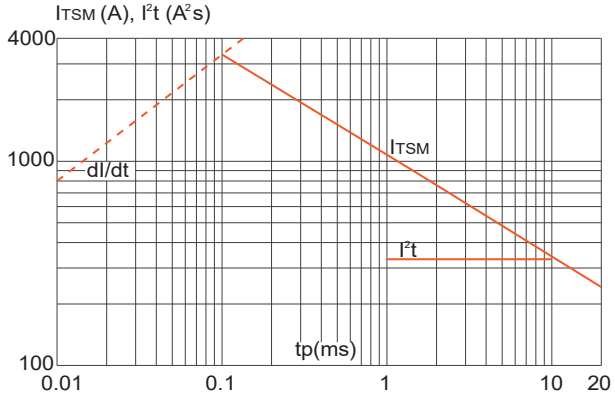
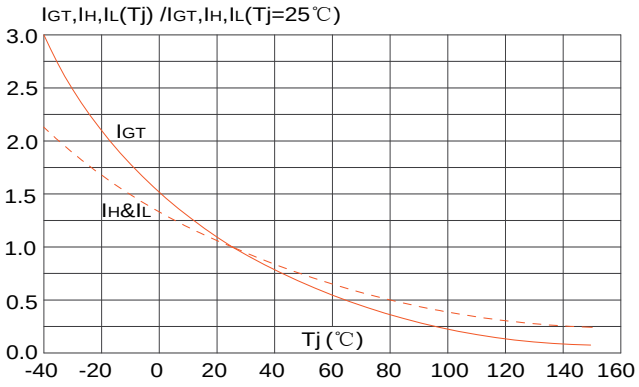
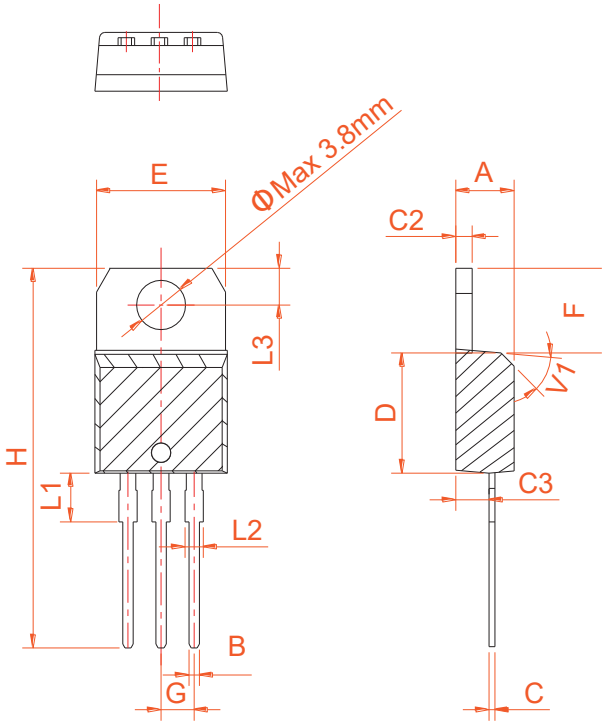


FIG6

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



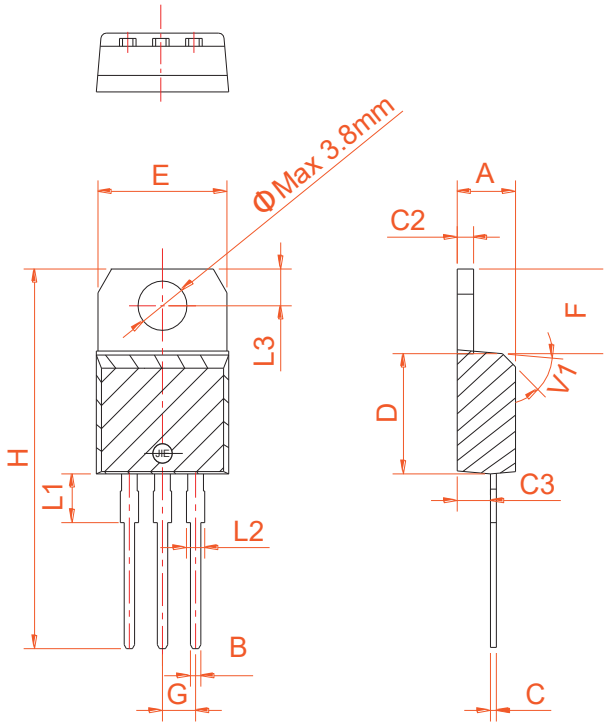
PACKAGE MECHANICAL DATA



TO-220A Ins

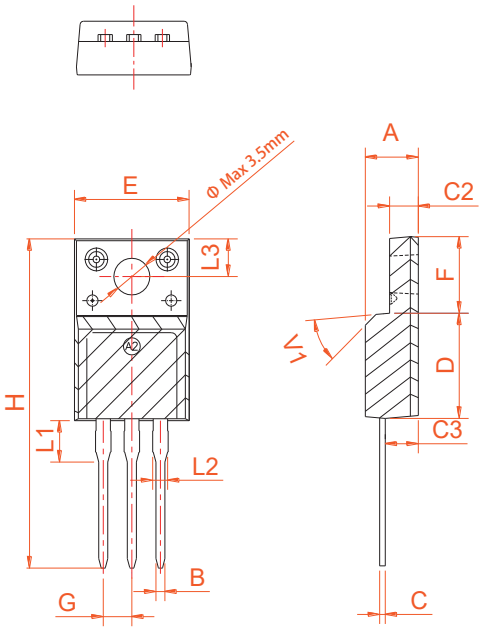
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.61		0.88	0.024		0.035
C	0.46		0.70	0.018		0.028
C2	1.21		1.32	0.048		0.052
C3	2.40		2.72	0.094		0.107
D	8.60		9.70	0.339		0.382
E	9.80		10.4	0.386		0.409
F	6.55		6.95	0.258		0.274
G		2.54			0.1	
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°	

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	0.244		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°	



TO-220B Non-Ins

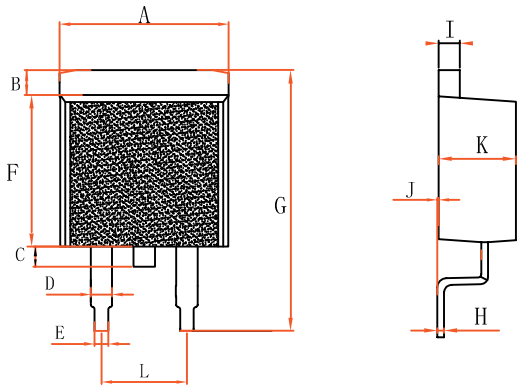
PACKAGE MECHANICAL DATA



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°	

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	9.7		10.4	0.381		0.409
B	1.31		1.62	0.051		0.063
C	0.65		1.22	0.025		0.048
D	1.15		1.36	0.045		0.053
E	0.62		0.95	0.024		0.037
F	8.75		9.32	0.344		0.366
G	14.75		15.8	0.58		0.622
H	0.32		0.48	0.012		0.018
I	1.18		1.36	0.046		0.053
J	0		0.15	0		0.005
K	4.38		4.86	0.172		0.191
L	4.85		5.23	0.19		0.205



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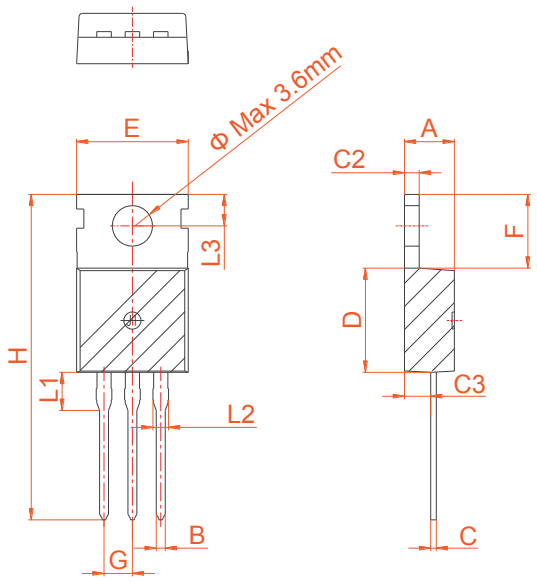

TO-220C

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.70		0.90	0.028		0.035
C	0.45		0.60	0.018		0.024
C2	1.23		1.32	0.048		0.052
C3	2.20		2.60	0.087		0.102
D	8.90		9.90	0.350		0.390
E	9.90		10.3	0.390		0.406
F	6.30		6.90	0.248		0.272
G		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.39			0.133	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116
Φ		3.6			0.142	