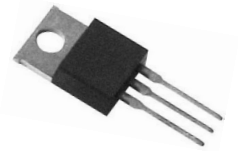
VOLTAGE 600/800 V

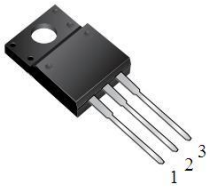
CURRENT 12.0 A

Features

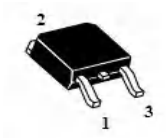
- High current triac
- Low thermal resistance with clip bonding
- High commutation or very high



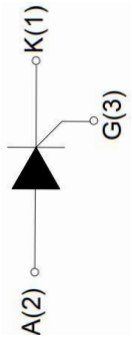
TO-220AB



ITO-220AB



TO-252



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

ELECTRICAL CHARACTERISTICS (Tj = 25°C, unless otherwise specified)

Symbol	Parameter	Conditions	Ratings	Unit
VDRM VRRM	Repetitive Peak Off-State Voltage	BT151-600	600	V
		BT151-800	800	
IT(RMS)	R.M.S On-State Current	Tc=105°C	12	A
IT(AV)	On-state average current	TC=105°C	7.5	A
ITSM	Surge On-State Current	Tp=10ms/tp=8.3ms	120/132	A
I²t	I²t for fusing	Tp=10ms	75	A²s
PGM	Peak Gate Power Dissipation	Tj=125°C	2	W
PG(AV)	Average Gate Power Dissipation	Tj=125°C	0.5	W
Tj	Operating Junction Temperature		~40~125	°C
TSTG	Storage Temperature		~40~150	°C

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

Symbol	Parameter	Test Conditions	Value	Unit
IDRM	Repetitive Peak Off-State Current	Tc=25°C	≤10	uA
		Tc=125°C	≤1	mA
IRRM	Repetitive Peak Reverse Current	Tc=25°C	≤10	uA
		Tc=125°C	≤1	mA
VTM	Forward "on" voltage	IT=23A, tp=380us	≤1.7	V
VGT	Gate trigger voltage	VD=12V ,RL=30Ω	≤1.0	V
di/dt	Critical rate of rise of on-state current	Tj=125°C, IG=2xIGT, tr≤100ns	≥50	A/us
IGT	Gate trigger current	VD=12V, IT=0.1A	≤20	mA
IL	Latching current	IG=1.2IGT	≤40	mA
IH	Holding current	IT=0.1A	≤30	mA
VGD	Gate non-trigger voltage	VD=VDRM, TJ=125°C,RL=3.3KΩ,RGK=1KΩ	≥0.25	V
dv/dt	Critical-rate of rise of commutation voltage	TJ=125°C, VD=2/3VDRM, Gate open circuit	≥200	V/us
Rth(j-c)	Thermal resistance	Junction to case	1	°C/W
Rth(j-a)	Thermal resistance	Junction to ambient	50	°C/W

RATING AND CHARACTERISTIC CURVES

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

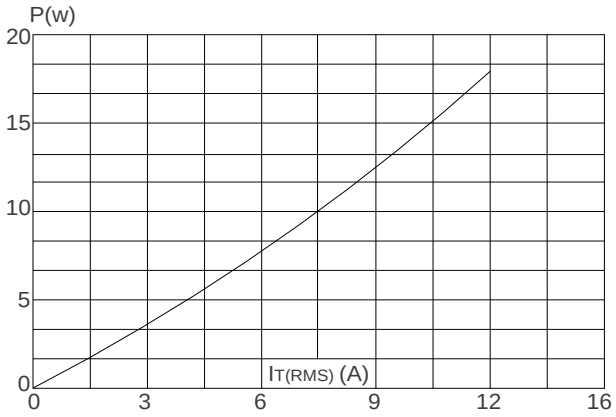


FIG.2: RMS on-state current versus case temperature

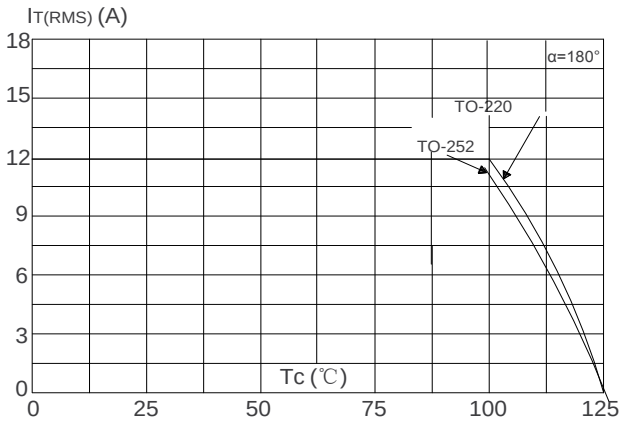


FIG.3: Surge peak on-state current versus number of cycles

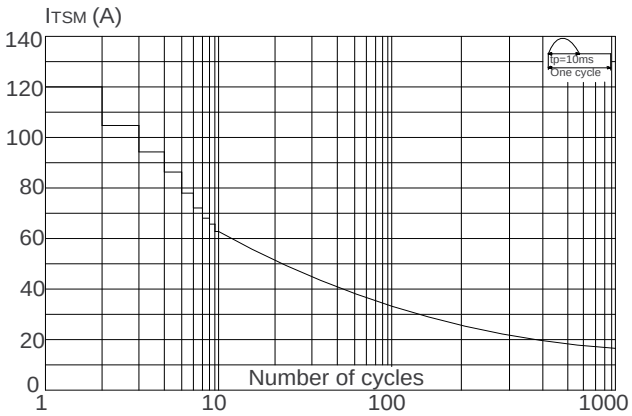


FIG.4: On-state characteristics (maximum values)

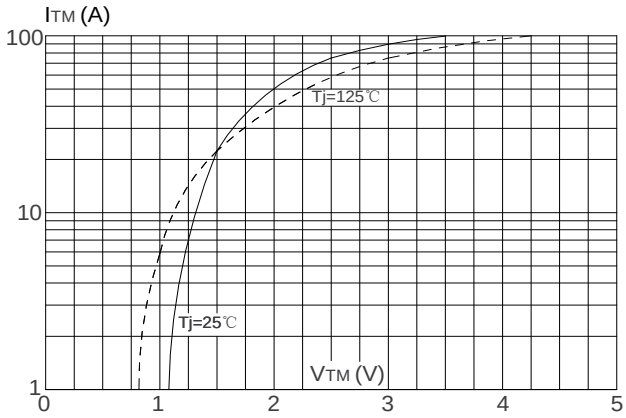


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp<20ms, and corresponging value of I^2t (dI/dt < 100A/μs)

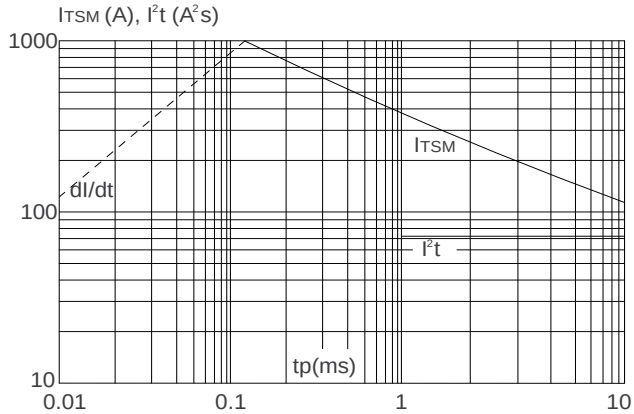
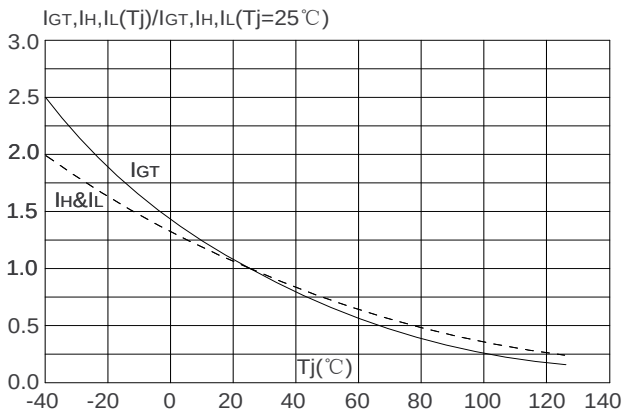


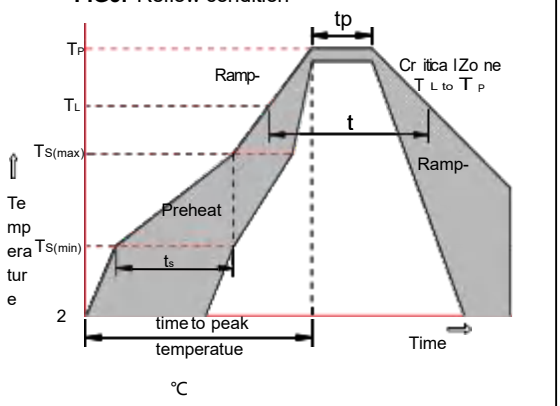
FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature



Soldering parameters

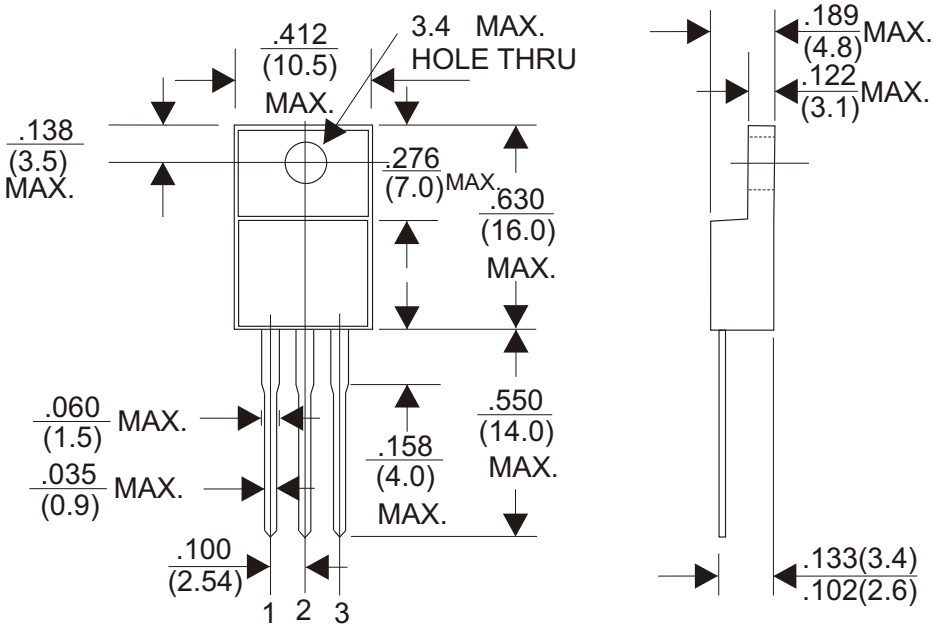
Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

FIG5: Reflow condition



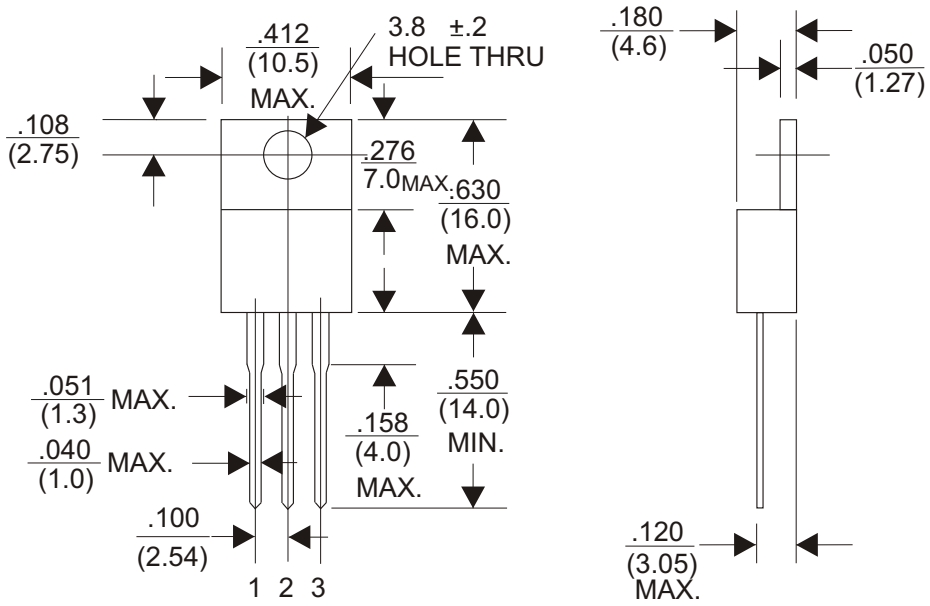
Package Dimensions & Suggested Pad Layout

ITO-220AB

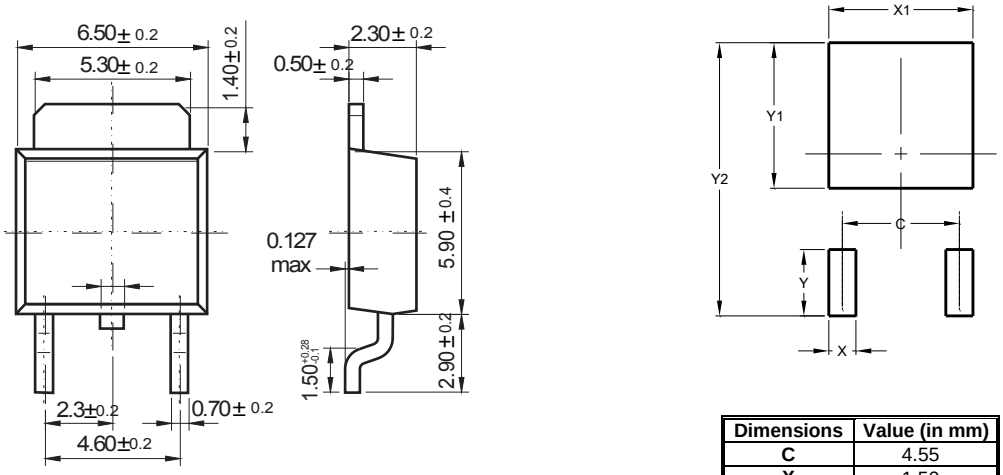


Package Dimensions & Suggested Pad Layout

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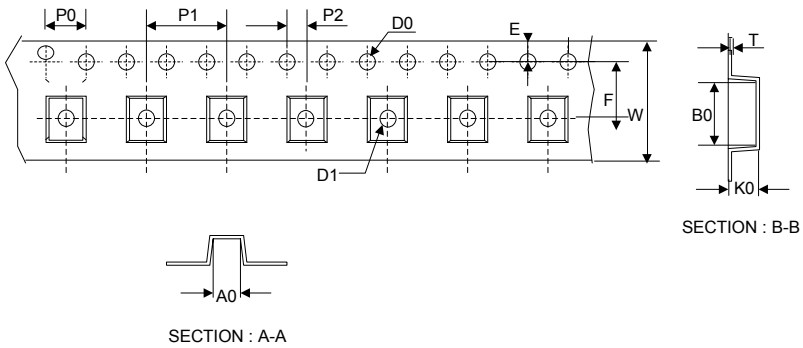


Dimensions in inches and (millimeters)

Dimensions	Value (in mm)
C	4.55
X	1.50
X1	5.80
Y	2.70
Y1	6.00
Y2	10.90

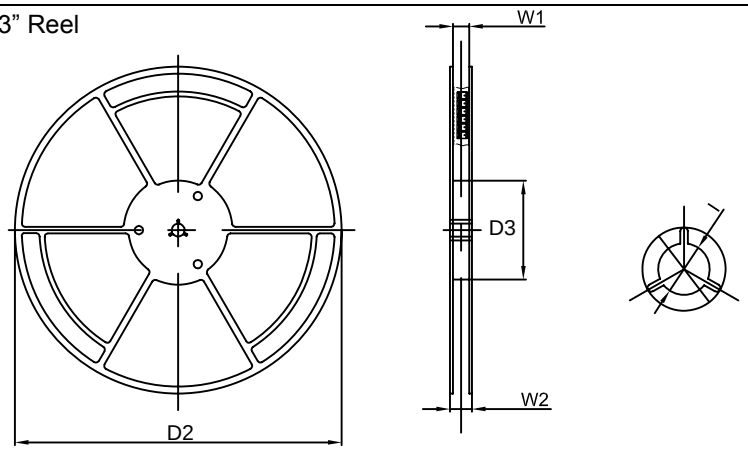
Tape & rell specification

Tape



Symbol	Dimension (mm)
P0	4.00±0.20
P1	8.00±0.20
P2	2.00±0.20
D0	1.55±0.15
D1	1.55±0.20
E	1.75±0.20
F	7.50±0.20
W	16.00±0.20
A0	7.10±0.20
B0	10.50±0.20
K0	2.70±0.20
T	0.30±0.10

13” Reel



D2	330.0±5.0
D3	100.0±4.0
W1	20.0±5.0
W2	25.0±5.0
I	13.0±2.0

Quantity: 2500PCS