

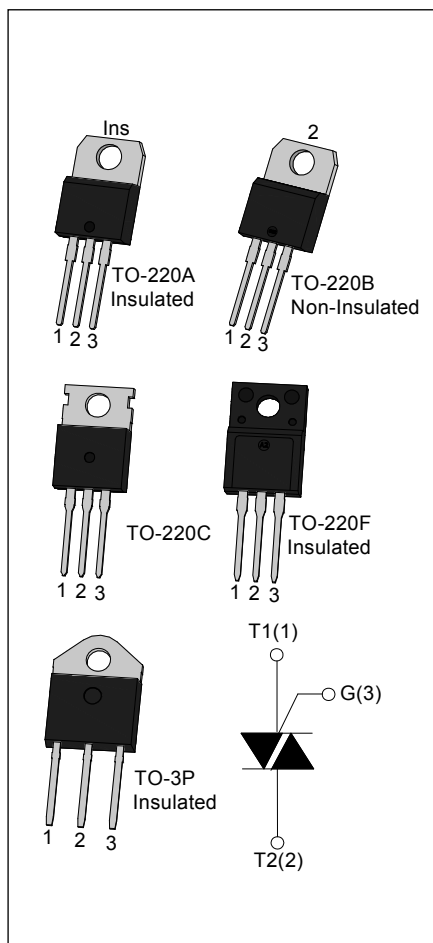


DESCRIPTION:

T30xxH series triacs, with high ability to withstand the shock loading of large current, provide high dv/dt rate with strong resistance to electromagnetic interference. With high commutation performances, 3 quadrants products especially recommended for use on inductive load. From all three terminals to external heatsink, T30xxH-xxA provides a rated insulation voltage of 2500 V_{RMS}, and T30xxH-xxF provides a rated insulation voltage of 2000 V_{RMS}, complying with UL standards. (File ref: E252906). All the packages are RoHS compliant. (2011/65/EU)

MAIN FEATURES

Symbol	Value	Unit
T _j	150	°C
I _{T(RMS)}	30	A
V _{DRM} /V _{RPM}	600/800	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°C)	V _{DRM}	600/800	V	
Repetitive peak reverse voltage (T _j =25°C)	V _{RPM}	600/800	V	
RMS on-state current	TO-220A(Ins)/ TO-220F(Ins) (T _c =75°C)	I _{T(RMS)}	30	A
	TO-220C/ TO-220B(Non-Ins) (T _c =85°C)			
	TO-3P (T _c =100°C)			

Non repetitive surge peak on-state current (full cycle, F=50Hz)	I_{TSM}	270	A
I^2t value for fusing ($t_p=10ms$)	I^2t	340	A^2s
Critical 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}	10	W

ELECTRICAL CHARACTERISTICS ($T_j=25^\circ C$ unless otherwise specified)

Symbol	Test Condition	Quadrant		Value		Unit
				T3035H	T3050H	
I_{GT}	$V_D=12V R_L=33\Omega$	I - II -III	MAX	35	50	mA
V_{GT}		I - II -III	MAX	1.3		V
V_{GD}	$V_D=V_{DRM} T_j=150^\circ C$ $R_L=3.3K\Omega$	I - II -III	MIN	0.2		V
I_L	$I_G=1.2I_{GT}$	I -III	MAX	50	70	mA
		II		60	80	
I_H	$I_T=100mA$		MAX	40	50	mA
dV/dt	$V_D=2/3V_{DRM}$ Gate Open $T_j=150^\circ C$		MIN	500	1000	$V/\mu s$

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX)	Unit
V_{TM}	$I_{TM}=35A t_p=380\mu s$	$T_j=25^\circ C$	1.5	V
V_{TO}	Threshold voltage	$T_j=150^\circ C$	0.88	V
R_d	Dynamic resistance	$T_j=150^\circ C$	26	$m\Omega$
I_{DRM}	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25^\circ C$	5	μA
I_{RRM}		$T_j=150^\circ C$	3	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
R _{th(j-c)}	junction to case(AC)	TO-220A(Ins)	1.5
		TO-220F(Ins)	1.7
		TO-220C/ TO-220B (Non-Ins)	1.3
		TO-3P(Ins)	0.9
			°C/W

ORDERING INFORMATION

<p>T</p> <p>Triacs</p> <p>30: I_{T(RMS)}:30A</p> <p>35: I_{GT1-3} ≤ 35mA</p> <p>50: I_{GT1-3} ≤ 50mA</p>	<p>30</p>	<p>35</p>	<p>H</p> <p>H: T_j = 150°C</p> <p>6: V_{DRM} / V_{RRM} ≥ 600V</p> <p>8: V_{DRM} / V_{RRM} ≥ 800V</p>	<p>-6</p>	<p>A</p> <p>C: TO-220C</p> <p>Z: TO-3P(Ins)</p> <p>A: TO-220A(Ins)</p> <p>F: TO-220F(Ins)</p> <p>B: TO-220B(Non-Ins)</p>	<p>-/</p> <p>Blank: Tube</p>
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MARKING

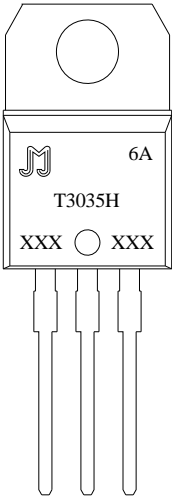
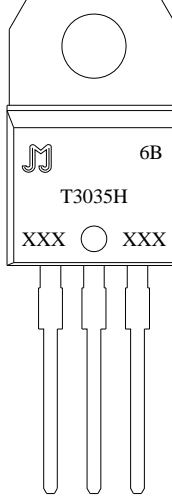
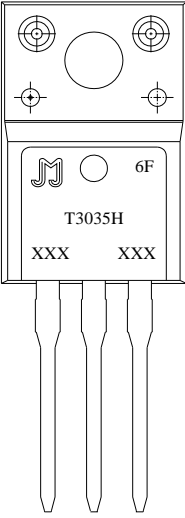
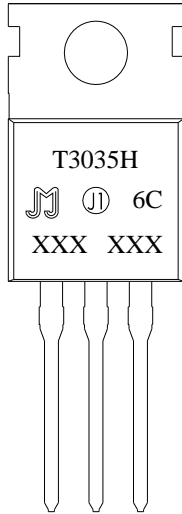
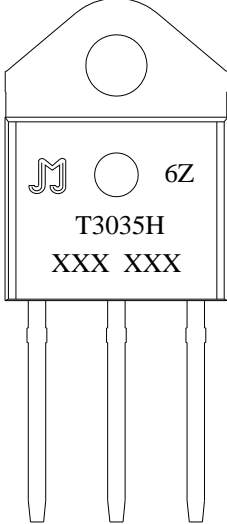
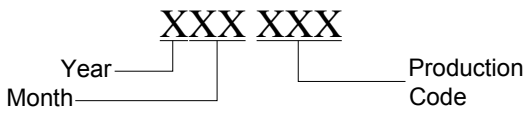
 <p>Diagram showing the marking on a T3035H 6A component. The marking includes the company logo (M), the model number T3035H, the part number 6A, and a production code XXX XXX.</p>	 <p>Diagram showing the marking on a T3035H 6B component. The marking includes the company logo (M), the model number T3035H, the part number 6B, and a production code XXX XXX.</p>
 <p>Diagram showing the marking on a T3035H 6F component. The marking includes the company logo (M), the model number T3035H, the part number 6F, and a production code XXX XXX.</p>	 <p>Diagram showing the marking on a T3035H 6C component. The marking includes the model number T3035H, the company logo (M), the part number 6C, and a production code XXX XXX.</p>
 <p>Diagram showing the marking on a T3035H 6Z component. The marking includes the company logo (M), the model number T3035H, the part number 6Z, and a production code XXX XXX.</p>	 <p>Legend for the production code XXX XXX. The first three digits (XXX) represent the Year and Month, and the last three digits (XXX) represent the Production Code.</p>

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

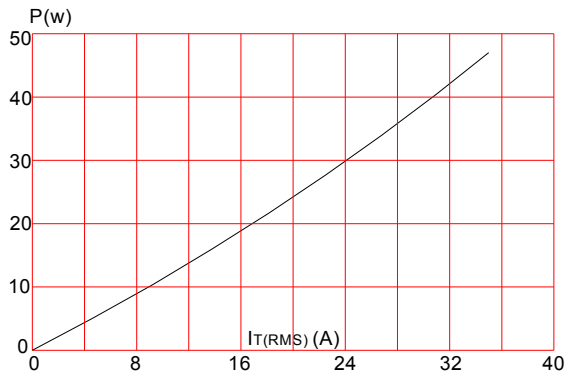


FIG.3: Surge peak on-state current versus number of cycles

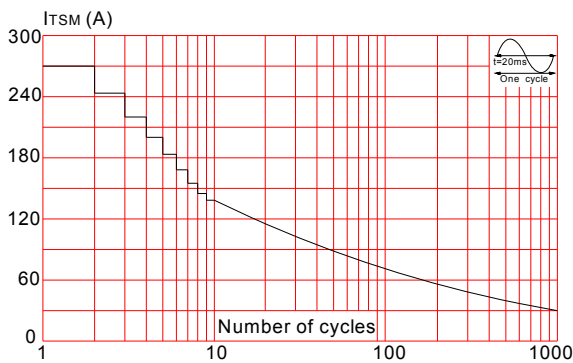


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20\text{ms}$, and corresponding value of I^2t ($dI/dt < 50\text{A}/\mu\text{s}$)

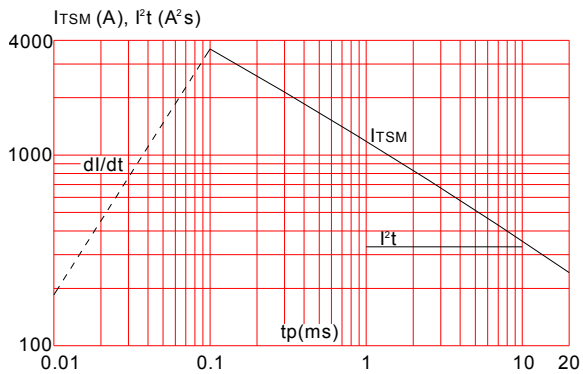


FIG.2: RMS on-state current versus case temperature

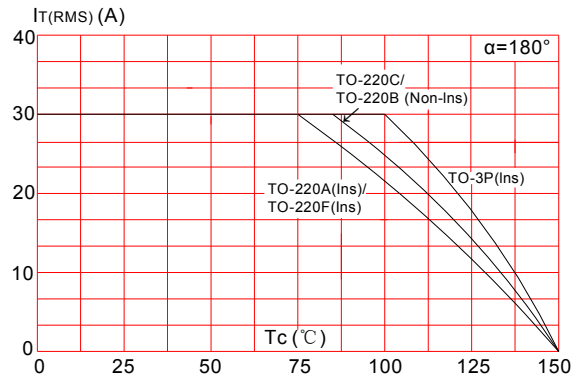


FIG.4: On-state characteristics (maximum values)

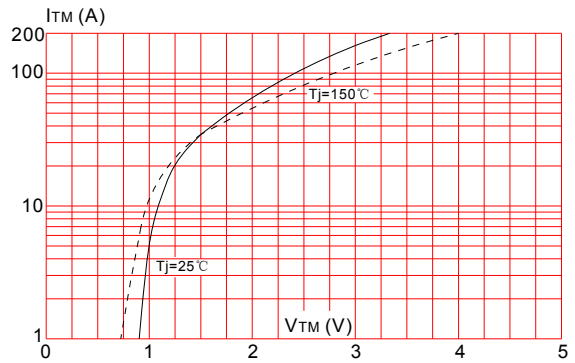
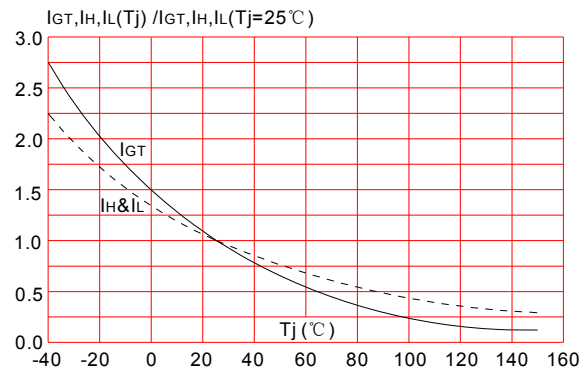


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature



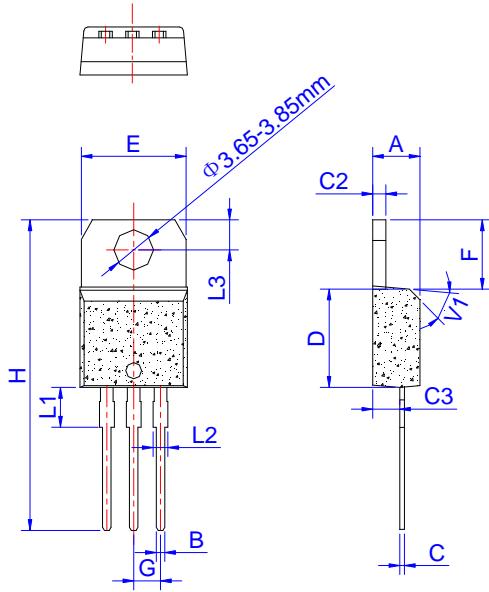
ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
T3035H-6(8)A	600/800	35	TO-220A(Ins)	50	Tube
T3050H-6(8)A		50			
T3035H-6(8)B		35	TO-220B		
T3050H-6(8)B		50			
T3035H-6(8)C		35	TO-220C		
T3050H-6(8)C		50			
T3035H-6(8)F		35	TO-220F(Ins)		
T3050H-6(8)F		50			
T3035H-6(8)Z		35	TO-3P	30	
T3050H-6(8)Z		50			

Document Revision History

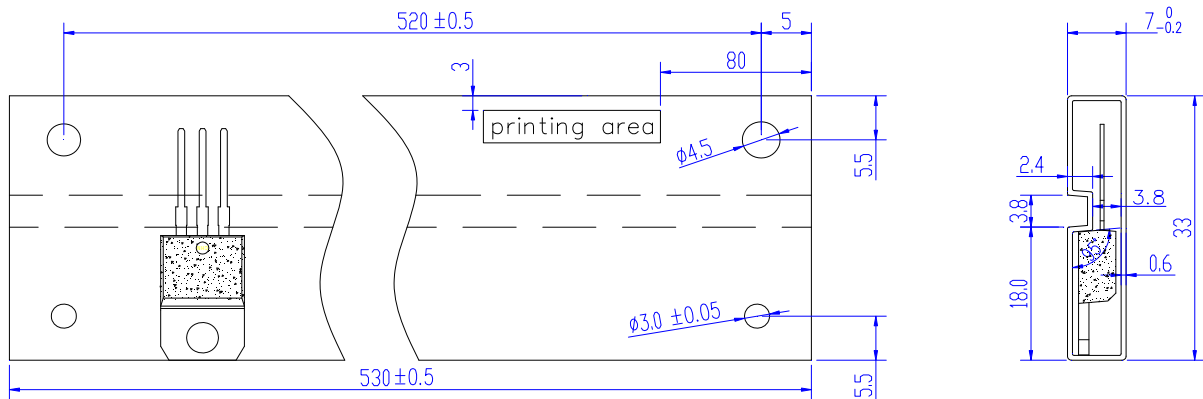
Date	Revision	Changes
May 19, 2021	7	Add package TO-220C, Last update
Oct 18, 2021	8	Add Vto & Rd value

PACKAGE MECHANICAL DATA



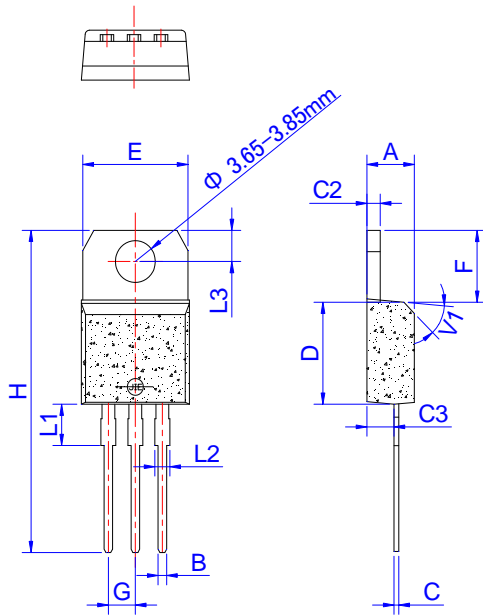
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.61		0.88	0.024		0.035
C	0.46		0.70	0.018		0.028
C2	1.21		1.32	0.048		0.052
C3	2.40		2.72	0.094		0.107
D	8.60		9.70	0.339		0.382
E	9.80		10.4	0.386		0.409
F	6.55		6.95	0.258		0.274
G	2.40		2.70	0.094		0.106
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°	

DELIVERY MODE



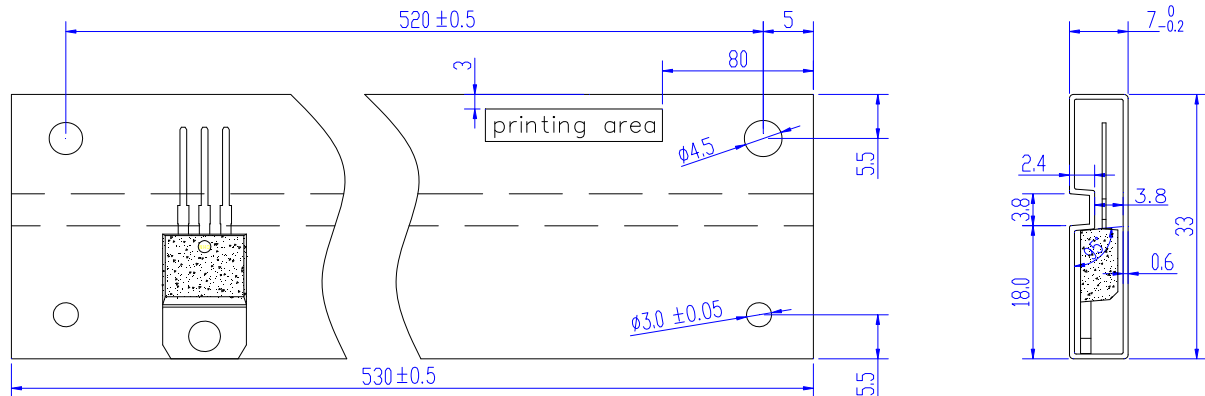
PACKAGE	OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON
TO-220A	TUBE	50	1,000	5,000

PACKAGE MECHANICAL DATA



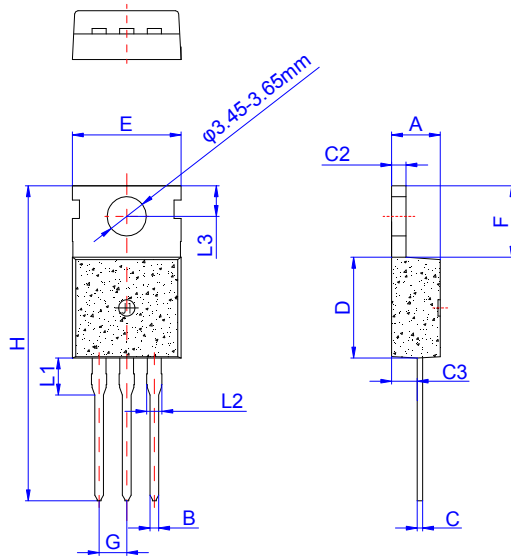
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.61		0.88	0.024		0.035
C	0.46		0.70	0.018		0.028
C2	1.21		1.32	0.048		0.052
C3	2.40		2.72	0.094		0.107
D	8.60		9.70	0.339		0.382
E	9.60		10.4	0.378		0.409
F	6.20		6.60	0.244		0.260
G	2.40		2.70	0.094		0.106
H	28.0		29.8	1.102		1.173
L1		3.75			0.147	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116
V1		45°			45°	

DELIVERY MODE



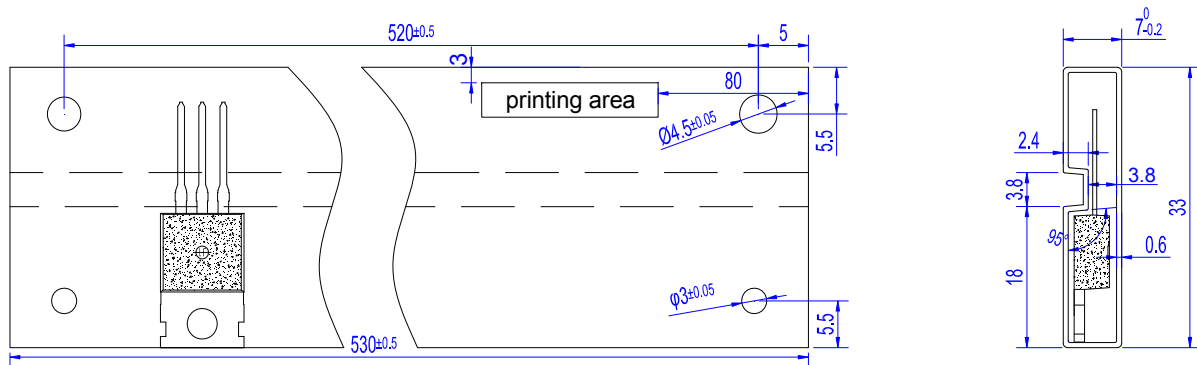
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TO-220B	TUBE	50	1,000	5,000

PACKAGE MECHANICAL DATA



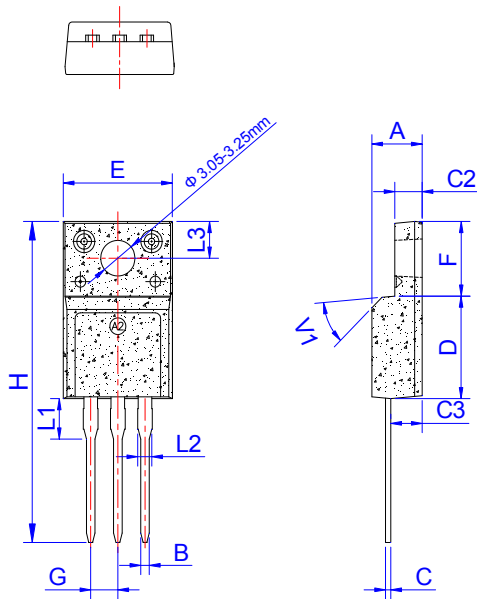
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.70		0.90	0.028		0.035
C	0.45		0.60	0.018		0.024
C2	1.23		1.32	0.048		0.052
C3	2.20		2.60	0.087		0.102
D	8.90		9.90	0.350		0.390
E	9.90		10.3	0.390		0.406
F	6.30		6.90	0.248		0.272
G		2.54			0.1	
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

DELIVERY MODE



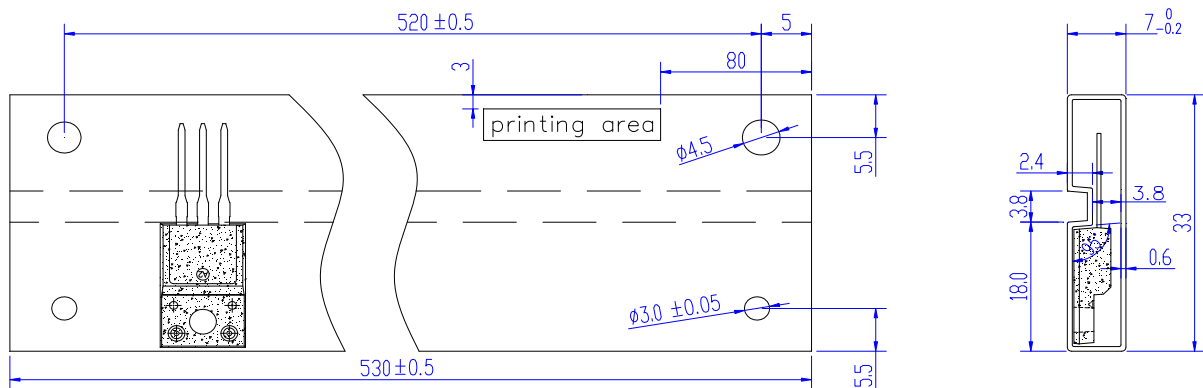
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TO-220C	TUBE	50	1,000	5,000

PACKAGE MECHANICAL DATA



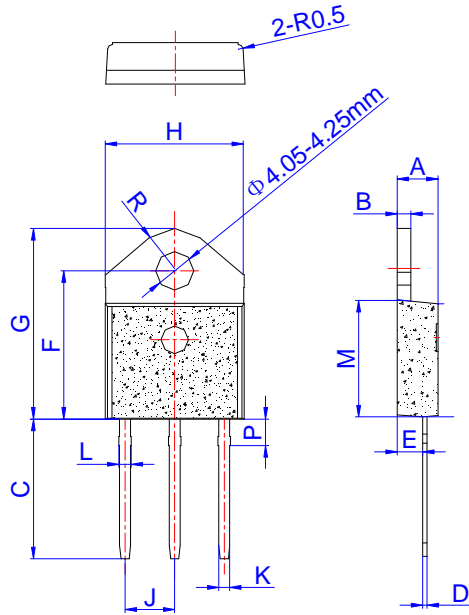
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.50		4.90	0.177		0.193
B	0.74	0.80	0.83	0.029	0.031	0.033
C	0.47		0.65	0.019		0.026
C2	2.45		2.75	0.096		0.108
C3	2.60		3.00	0.102		0.118
D	8.80		9.30	0.346		0.366
E	9.80		10.4	0.386		0.410
F	6.40		6.80	0.252		0.268
G	2.40		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



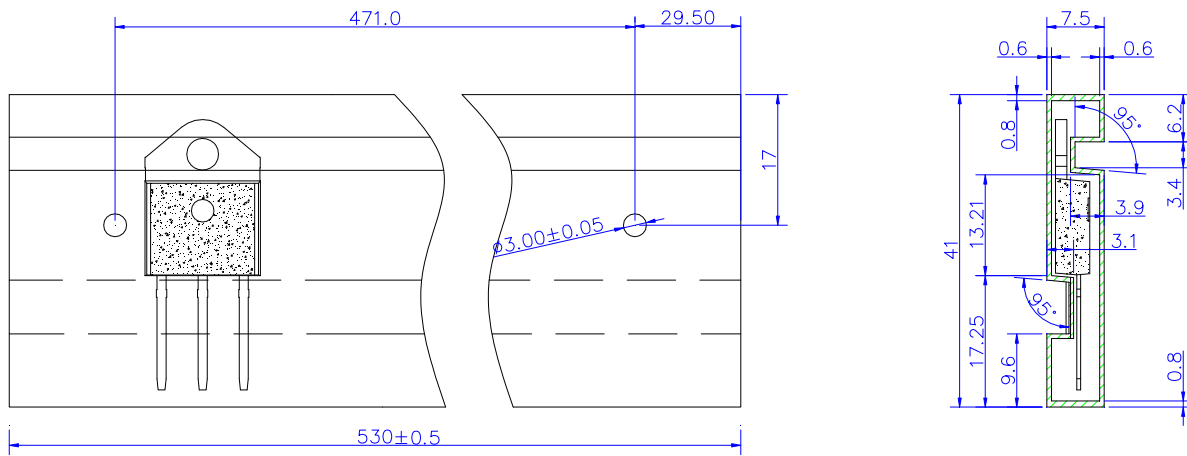
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TO-220F	TUBE	50	1,000	5,000

PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	1.45		1.55	0.057		0.061
C	14.35		15.60	0.565		0.614
D	0.50		0.70	0.020		0.028
E	2.70		2.90	0.106		0.114
F	15.80		16.50	0.622		0.650
G	20.40		21.10	0.803		0.831
H	15.10		15.50	0.594		0.610
J	5.40		5.65	0.213		0.222
K	1.10		1.40	0.043		0.055
L	1.25		1.45	0.049		0.057
M	12.37		12.77	0.487		0.503
P	2.80		3.00	0.110		0.118
R		4.35			0.171	


DELIVERY MODE



PACKAGE	OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON
TO-3P	TUBE	30	450	2,250



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