



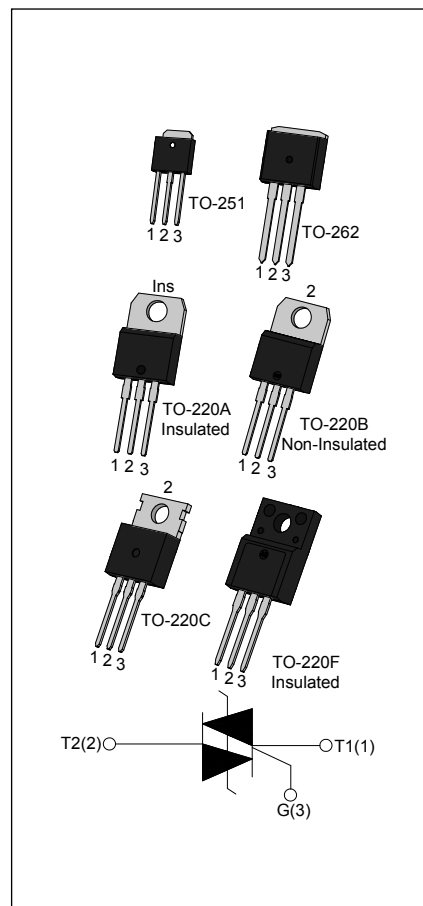
DESCRIPTION:

The ACJT8 series of double mesa technology provide high interference immunity, They can be used as a static ON/OFF function in electrical control system, and used as a driver of low power and high inductance or resistive loads, such as jet pumps of dishwashers, fans of air-conditioner ...

From all three terminals to external heatsink, ACJT8xx-xxA provides a rated insulation voltage of 2500 V_{RMS}, and ACJT8xx-xxF provides a rated insulation voltage of 2000 V_{RMS}, complying with UL standards (File ref: E252906). All the packages listed above are RoHS compliant. (2011/65/EU)

MAIN FEATURES

Symbol	Value	Unit
I _{T(RMS)}	8	A
V _{DRM} /V _{RRM}	800/1000	V
I _{GT1-3}	≤5 or ≤10 or ≤25	mA



ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Storage junction temperature range		T _{stg}	-40-150	°C
Operating junction temperature range		T _j	-40-125	°C
Repetitive peak off-state voltage(T _j =25°C)		V _{DRM}	800/1000	V
Repetitive peak reverse voltage(T _j =25°C)		V _{RRM}	800/1000	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-220A(Ins)/ TO-220F(Ins) (T _c =85°C)	I _{T(RMS)}	8	A

RMS on-state current	TO-251/TO-220C/ TO-220B(Non-Ins)/ TO-262 (T _C =95°C)	I _{T(RMS)}	8	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)		I _{TSM}	80	A
I ² t value for fusing (t _p =10ms)		I ² t	32	A ² s
Rate of rise of on-state current (I _G =2×I _{GT})		dI _T /dt	50	A/μs
Peak gate current		I _{GM}	1	A
Average gate power dissipation		P _{G(AV)}	0.1	W
Peak gate power		P _{GM}	1	W
Peak pulse voltage (T _j =25°C; non-repetitive, off-state; FIG.7)		V _{PP}	1	kV

ELECTRICAL CHARACTERISTICS (T_j=25°C unless otherwise specified)

Symbol	Test Condition	Quadrant		Value			Unit
				ACJT805	ACJT810	ACJT825	
I _{GT}	V _D =12V R _L =33Ω	I - II - III	MAX	5	10	25	mA
V _{GT}		I - II - III	MAX	1.3			V
V _{GD}	V _D =V _{DRM} T _j =125°C R _L =3.3KΩ	I - II - III	MIN	0.2			V
I _L	I _G =1.2I _{GT}	I - III	MAX	10	25	35	mA
		II		20	30	55	
I _H	I _T =100mA		MAX	10	15	30	mA
dV/dt	V _D =2/3V _{DRM} Gate Open T _j =125°C		MIN	200	600	1000	V/μs

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX)	Unit
V _{TM}	I _{TM} =11A t _p =380μs	T _j =25°C	1.55	V
V _{TO}	Threshold voltage	T _j =125°C	0.99	V
R _d	Dynamic resistance	T _j =125°C	41	mΩ
I _{DRM}	V _D =V _{DRM} V _R =V _{RDM}	T _j =25°C	5	μA
I _{RDM}		T _j =125°C	1	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
R _{th(j-c)}	junction to case(AC)	TO-251	2.5
		TO-220A(Ins)/ TO-220F(Ins)	3.3
		TO-220C/TO-262 TO-220B(Non-Ins)	2.3

ORDERING INFORMATION

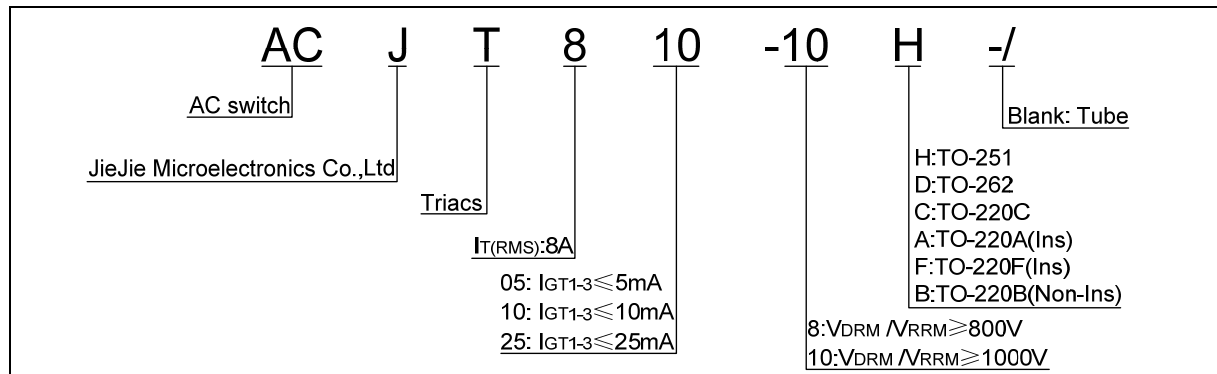


FIG.1 Maximum power dissipation versus RMS on-state current

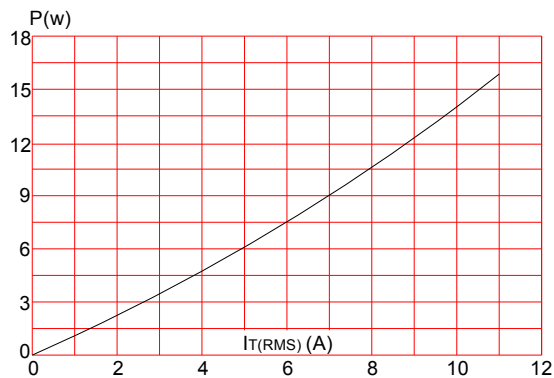


FIG.2: RMS on-state current versus case temperature

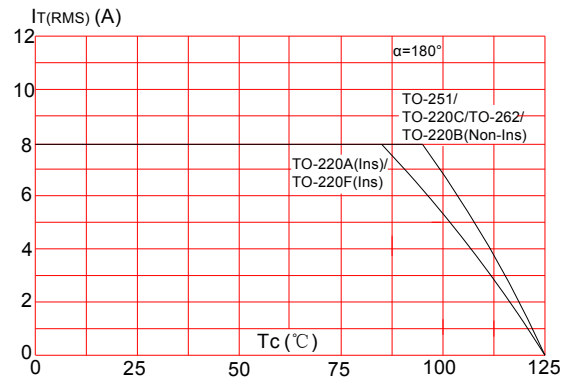


FIG.3: Surge peak on-state current versus number of cycles

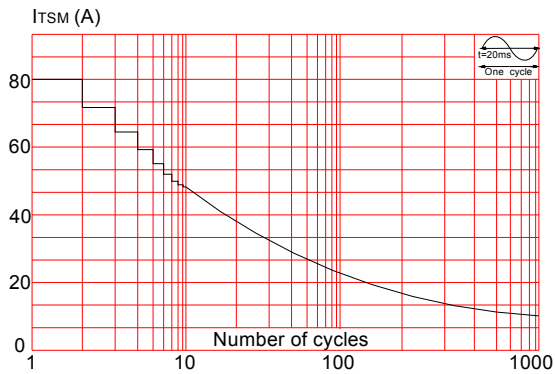


FIG.4: On-state characteristics (maximum values)

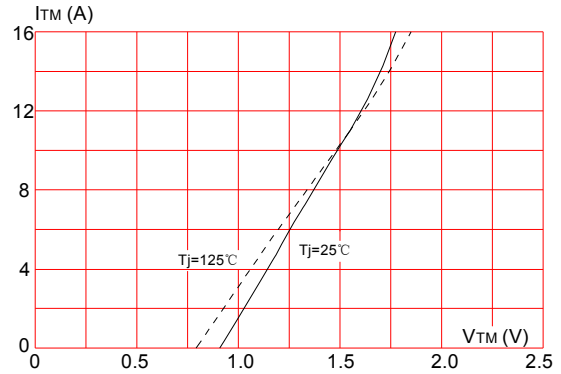


FIG.5: Relative variations of gate trigger current versus junction temperature

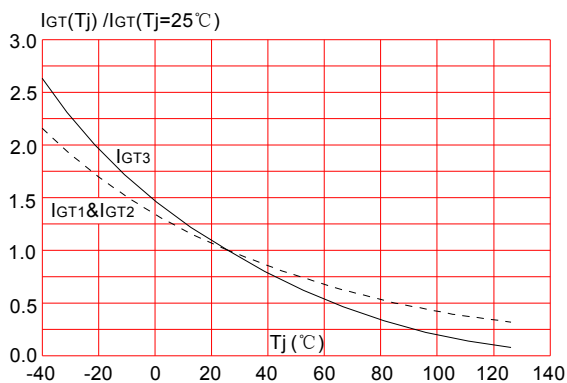


FIG.6: Relative variations of holding current, latching current versus junction temperature

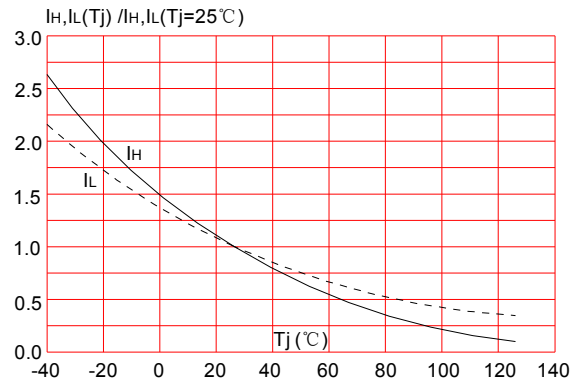
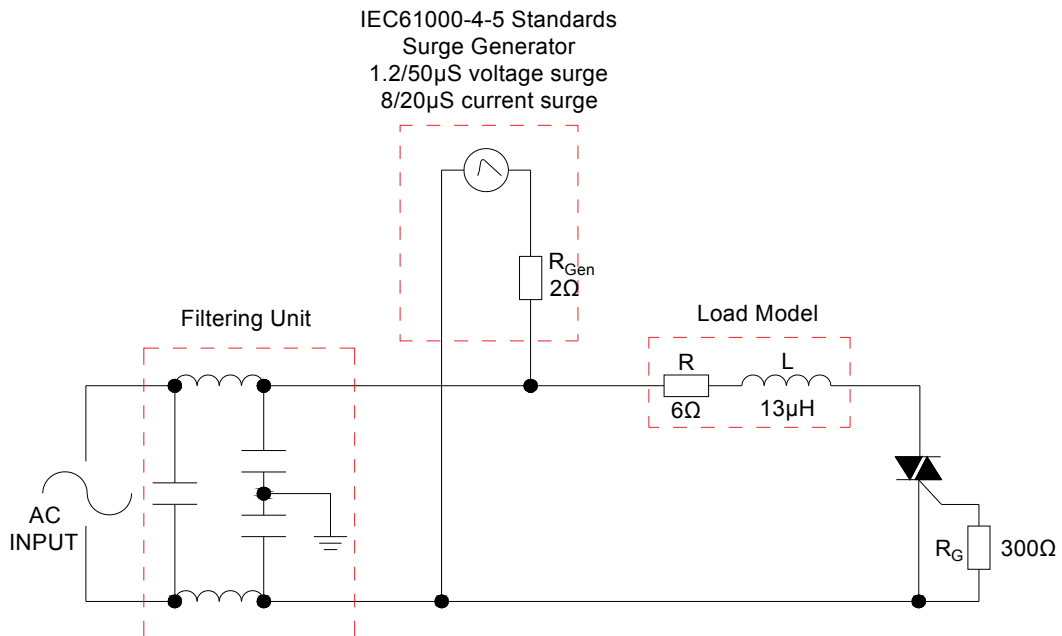


FIG.7: Test circuit for inductive and resistive loads to IEC-61000-4-5 standards.



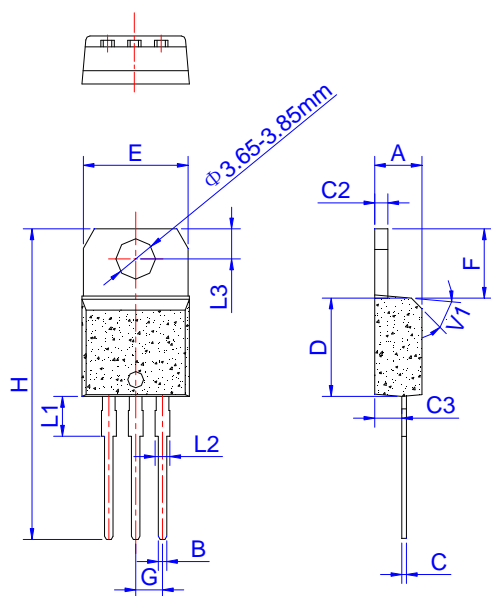
ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
ACJT805-8/10A	800/1000	5	TO-220A(Ins)	50	Tube
ACJT810-8/10A		10			
ACJT825-8/10A		25			
ACJT805-8/10B		5	TO-220B(Non-Ins)		
ACJT810-8/10B		10			
ACJT825-8/10B		25			
ACJT805-8/10C		5	TO-220C		
ACJT810-8/10C		10			
ACJT825-8/10C		25			
ACJT805-8/10D		5	TO-262		
ACJT810-8/10D		10			
ACJT825-8/10D		25			
ACJT805-8/10F		5	TO-220F(Ins)		
ACJT810-8/10F		10			
ACJT825-8/10F		25			
ACJT805-8/10H		5	TO-251	80	
ACJT810-8/10H		10			
ACJT825-8/10H		25			

Document Revision History

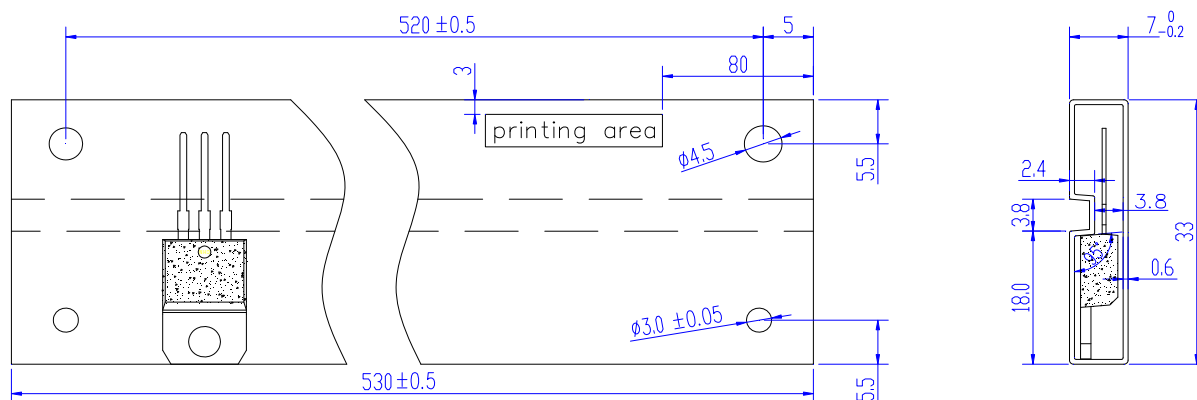
Date	Revision	Changes
Feb 17, 2019	10	Last update
Aug 20, 2021	11	Add TO-262 package
Jan 4, 2022	12	Add Vto & Rd

PACKAGE MECHANICAL DATA



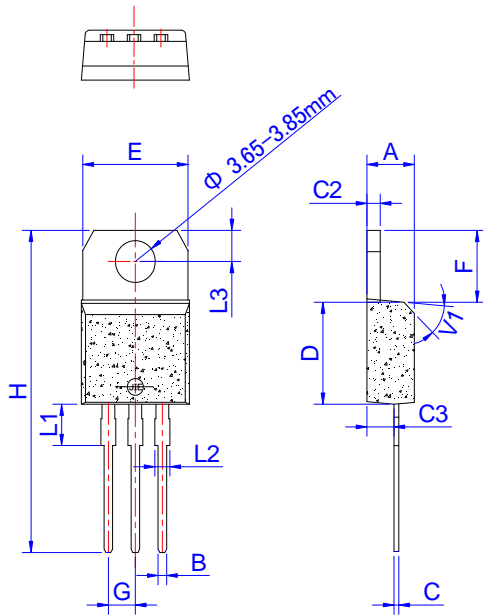
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.61		0.88	0.024		0.035
C	0.46		0.70	0.018		0.028
C2	1.21		1.32	0.048		0.052
C3	2.40		2.72	0.094		0.107
D	8.60		9.70	0.339		0.382
E	9.80		10.4	0.386		0.409
F	6.55		6.95	0.258		0.274
G	2.40		2.70	0.094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



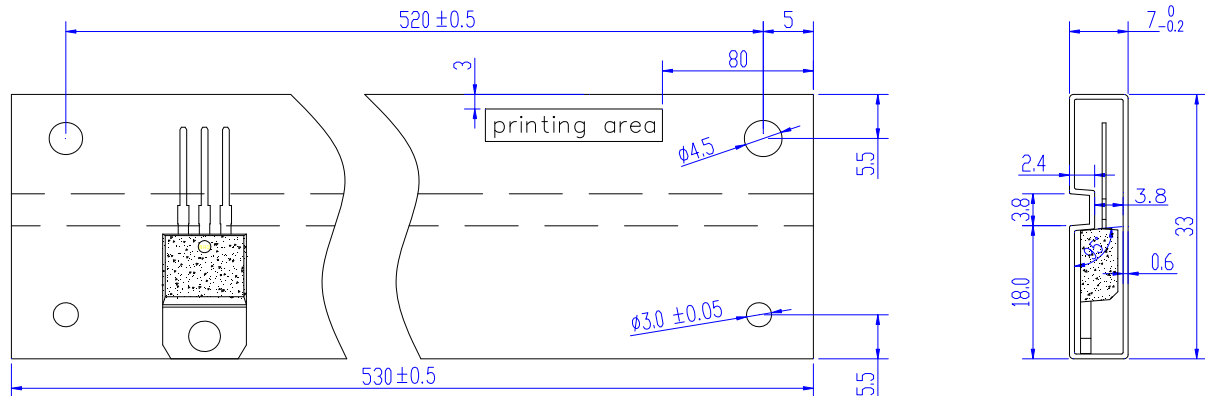
PACKAGE	OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON
TO-220A	TUBE	50	1,000	5,000

PACKAGE MECHANICAL DATA



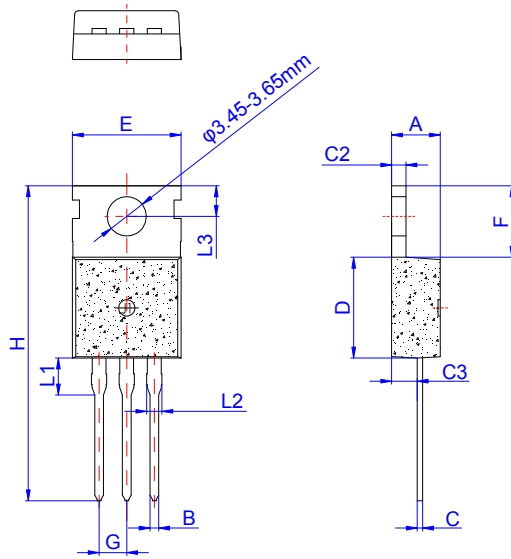
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.61		0.88	0.024		0.035
C	0.46		0.70	0.018		0.028
C2	1.21		1.32	0.048		0.052
C3	2.40		2.72	0.094		0.107
D	8.60		9.70	0.339		0.382
E	9.60		10.4	0.378		0.409
F	6.20		6.60	0.244		0.260
G	2.40		2.70	0.094		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



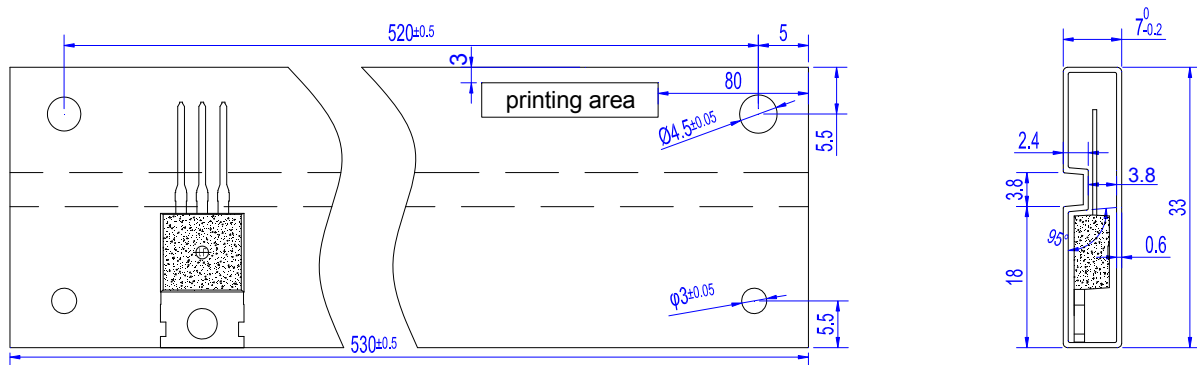
PACKAGE	OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON
TO-220B	TUBE	50	1,000	5,000

PACKAGE MECHANICAL DATA



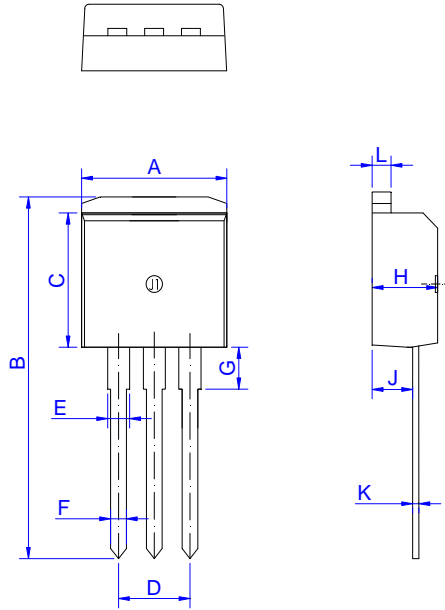
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.70		0.90	0.028		0.035
C	0.45		0.60	0.018		0.024
C2	1.23		1.32	0.048		0.052
C3	2.20		2.60	0.087		0.102
D	8.90		9.90	0.350		0.390
E	9.90		10.3	0.390		0.406
F	6.30		6.90	0.248		0.272
G		2.54			0.1	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



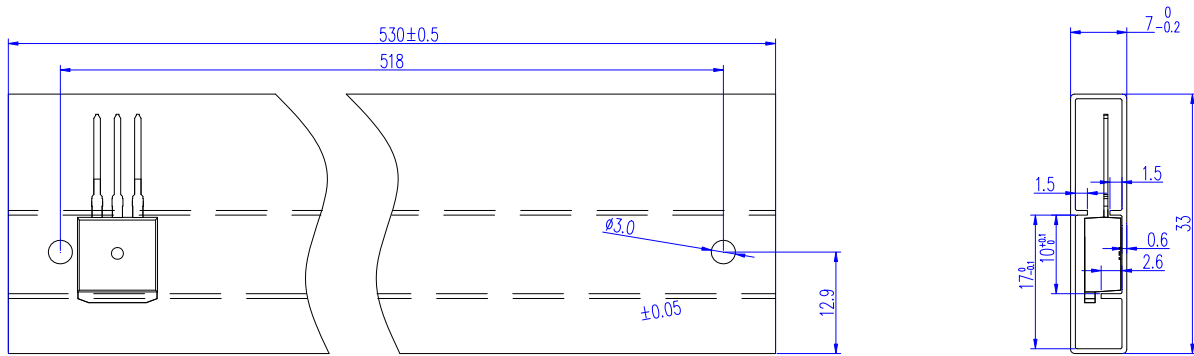
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TO-220C	TUBE	50	1,000	5,000

PACKAGE MECHANICAL DATA



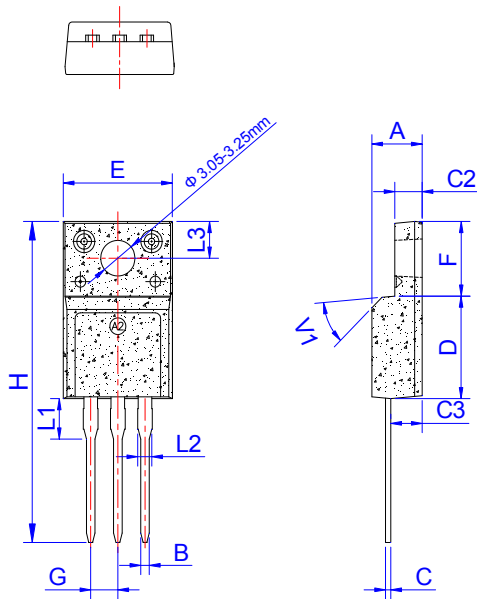
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	9.95		10.20	0.392		0.402
B	23.85		24.05	0.939		0.947
C	9.40		9.60	0.370		0.378
D	5.00		5.20	0.197		0.205
E	1.35		1.40	0.053		0.055
F	0.80		0.85	0.031		0.033
G	2.70		3.40	0.106		0.134
H	4.45		4.55	0.175		0.179
J	2.30		2.50	0.091		0.098
K	0.48		0.52	0.019		0.020
L	1.30		1.35	0.051		0.053

DELIVERY MODE



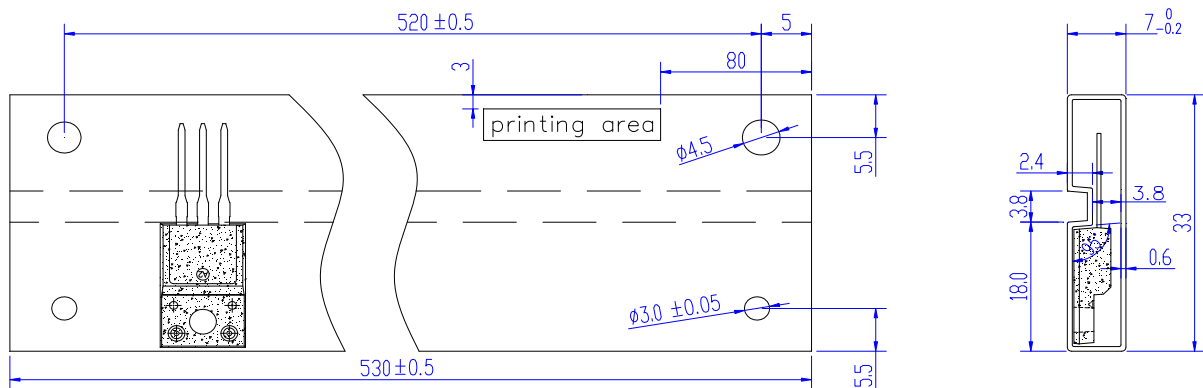
PACKAGE	OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON
TO-262	TUBE	50	1,000	5,000

PACKAGE MECHANICAL DATA



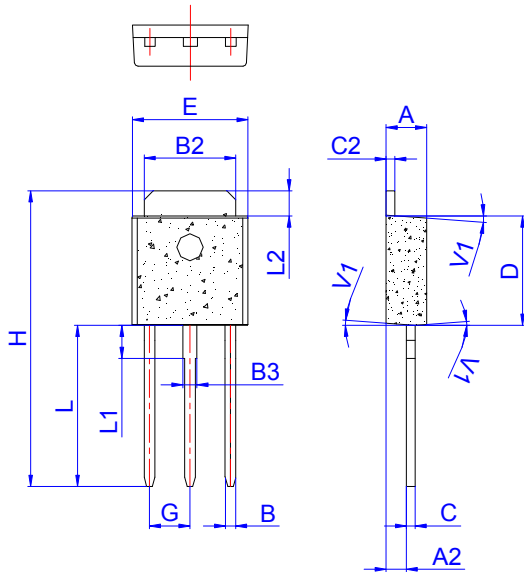
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.50		4.90	0.177		0.193
B	0.74	0.80	0.83	0.029	0.031	0.033
C	0.47		0.65	0.019		0.026
C2	2.45		2.75	0.096		0.108
C3	2.60		3.00	0.102		0.118
D	8.80		9.30	0.346		0.366
E	9.80		10.4	0.386		0.410
F	6.40		6.80	0.252		0.268
G	2.40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



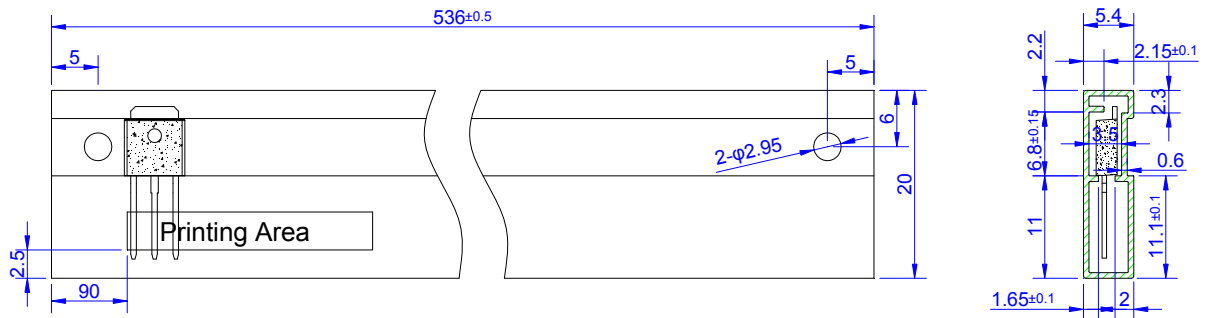
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TO-220F	TUBE	50	1,000	5,000

PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.20		2.40	0.086		0.095
A2	0.90		1.20	0.035		0.047
B	0.55		0.65	0.022		0.026
B2	5.10		5.40	0.200		0.213
B3	0.76		0.85	0.030		0.033
C	0.45		0.62	0.018		0.024
C2	0.48		0.62	0.019		0.024
D	6.00		6.20	0.236		0.244
E	6.40		6.70	0.252		0.264
G		2.30			0.091	
H	16.0		17.0	0.630		0.669
L	8.90		9.40	0.350		0.370
L1	1.80		1.90	0.071		0.075
L2	1.37		1.50	0.054		0.059
V1		4°			4°	

DELIVERY MODE



PACKAGE	OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON
TO-251	TUBE	80	4,000	20,000



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