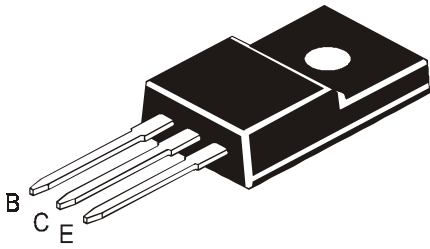


SILICON PLANAR POWER TRANSISTORS

CJF15030 NPN
CJF15031 PNP

TO-220FP Fully Isolated Plastic Package



Designed for General Purpose Amplifier and Switching Applications.

ABSOLUTE MAXIMUM RATINGS.

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Base Voltage	V_{CBO}	150	V
Collector Emitter Voltage	V_{CEO}	150	V
Emitter Base Voltage	V_{EBO}	5	V
RMS Isolation Voltage (for 1sec,R.H. <30%, $T_A=25^{\circ}C$)	(1) V_{ISOL} (a)	3500	V_{RMS}
	(b)	1500	V_{RMS}
Collector Current - Continuous	I_C	8	A
Collector Current - Peak	I_C	16	A
Base Current	I_B	2	A
Total Power Dissipation @ $T_c=25^{\circ}C$	$P_{D^{**}}$	36	W
Derate Above $25^{\circ}C$		0.29	W/ $^{\circ}C$
Total Power Dissipation @ $T_a=25^{\circ}C$	P_D	2	W
Derate Above $25^{\circ}C$		0.016	W/ $^{\circ}C$
Operating and Storage Junction Temperature Range	T_j, T_{stg}	- 65 to +150	$^{\circ}C$

THERMAL RESISTANCE

From Junction to Ambient	$R_{th(j-a)}$	62.5	$^{\circ}C/W$
From Junction to Case	$R_{th(j-c)^{**}}$	3.5	$^{\circ}C/W$
Lead Temperature for Soldering Purpose	T_L	260	$^{\circ}C$

****Measurement made with thermocouple contacting the bottom insulated mounting surface (in a location beneath the die), the device mounted on a heatsink with thermal grease and a mounting torque of ≥ 6 in.lbs.**

(1) RMS Isolation Voltage : (a) 3500 V_{RMS} with Package in Clip Mounting Position (b) 1500 V_{RMS} with Package in Screw Mounting Position (for 1sec, R.H.<30% , $T_a=25^{\circ}C$; Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$)

ELECTRICAL CHARACTERISTICS ($T_c=25^{\circ}C$ unless specified otherwise)

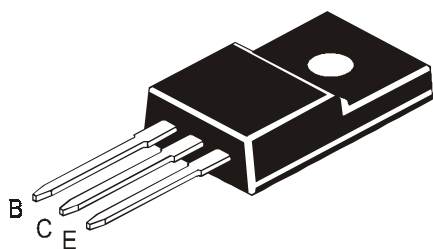
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector Emitter sustaining Voltage	$V_{CEO(sus)^*}$	$I_C=10mA, I_B=0$	150		V
Collector Cut off Current	I_{CBO}	$V_{CB}=150V, I_E=0$		10	μA
	I_{CEO}	$V_{CE}=150V, I_B=0$		10	μA
Emitter Cut off Current	I_{EBO}	$V_{EB}=5V, I_C=0$		10	μA

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

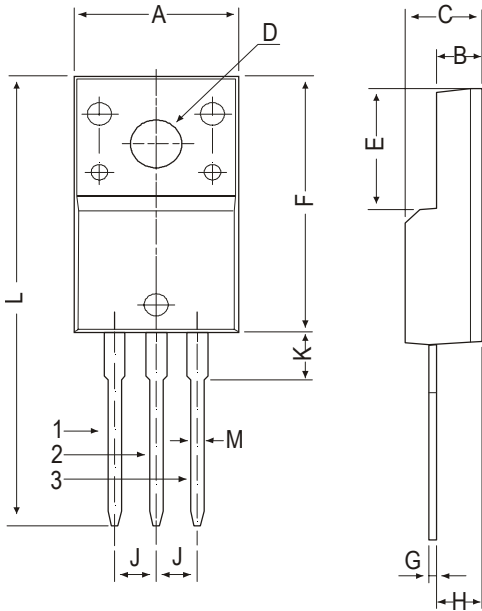
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
DC Current Gain	h _{FE} *	I _C =0.1A, V _{CE} =2V	40		
		I _C =2.0A, V _{CE} =2V	40		
		I _C =3.0A, V _{CE} =2V	40		
		I _C =4.0A, V _{CE} =2V	20		
Collector Emitter Saturation Voltage	V _{CE(Sat)} *	I _C =1A, I _B =0.1A		0.5	V
Base Emitter on Voltage	V _{BE(on)} *	I _C =1.0A, V _{CE} =2V		1.0	V
<u>DYNAMIC CHARACTERISTICS</u>					
Current Gain - Bandwidth Product **	f _T	I _C =500mA, V _{CE} =10V f _{test} =10MHz	30		MHz

* Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2 %

** f_T = |h_{fe}| f_{test}

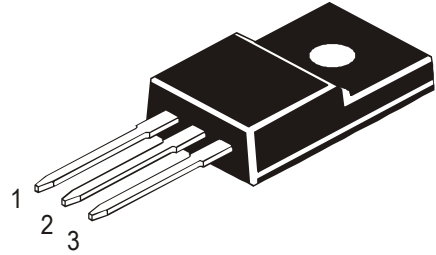
TO-220FP Fully Isolated Plastic Package

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DIM	MIN	MAX
A	9.96	10.36
B	2.60	3.00
C	4.50	4.90
D	3.10	3.30
E	7.90	8.20
F	16.87	17.27
G	0.45	0.50
H	2.56	2.96
J	2.34	2.74
K	—	3.08
L	—	30.05
M	—	0.80

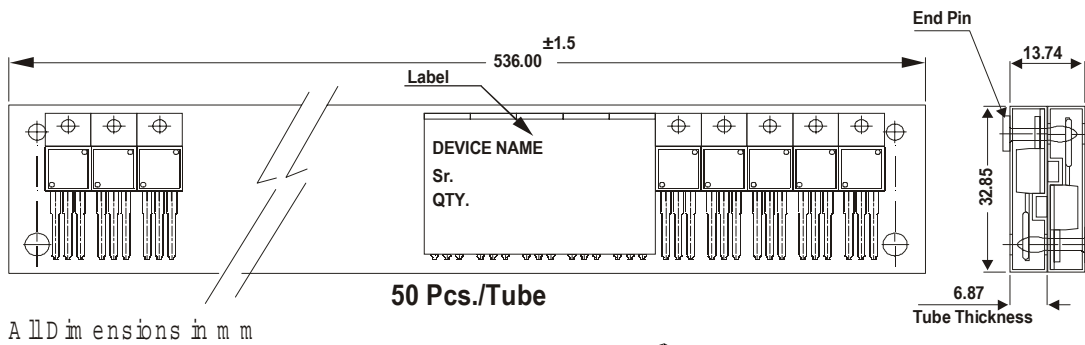
All dimensions in mm.



Pin Configuration

1. Base
2. Collector
3. Emitter

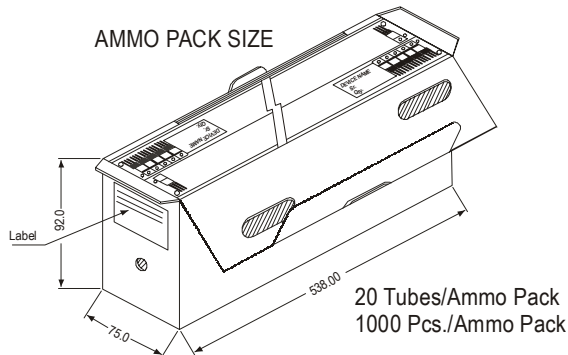
TO-220 FP Tube Packing



All dimensions in mm

50 Pcs./Tube

AMMO PACK SIZE



20 Tubes/Ammo Pack
1000 Pcs./Ammo Pack

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-220FP	200 pcs/polybag	396 gm/200 pcs	3" x 7.5" x 7.5"	1K	17" x 15" x 13.5"	16K	36 kgs
	50 pcs/tube	135 gm/50 pcs	3.5" x 3.7" x 21.5"	1K	19" x 19" x 19"	10K	28 kgs

Disclaimer

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