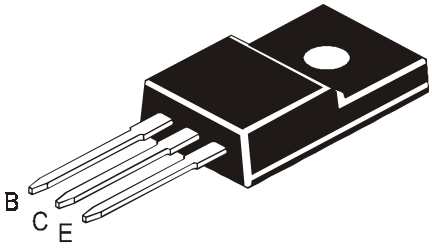
NPN SILICON PLANAR DARLINGTON POWER TRANSISTOR

CJF6388



TO-220FP Fully Isolated Plastic Package

Complementary CJF6668

General Purpose Darlington Amplifier and Switching Applications

ABSOLUTE MAXIMUM RATINGS.

DESCRIPTION	SYMBOL		VALUE	UNIT
Collector Base Voltage	V_{CBO}		100	V
Collector Emitter Voltage	V_{CEO}		100	V
Emitter Base Voltage	V_{EBO}		5	V
RMS Isolation Voltage (for 1sec,R.H.	(1) V_{ISOL}	(a)	3500	V_{RMS}
<30%, T_A=25ºC)		(b)	1500	V_{RMS}
Collector Current - Continuous	I_C		10	A
Peak (2)			15	A
Base Current	I_B		1	A
Total Power Dissipation @ Tc=25ºC	P_{D**}		40	W
Derate Above 25ºC			0.31	W/ºC
Total Power Dissipation @ Ta=25ºC	P_D		2	W
Derate Above 25ºC			0.016	W/ºC
Operating and Storage Junction Temperature Range	T_j, T_{stg}		- 65 to +150	ºC

THERMAL RESISTANCE

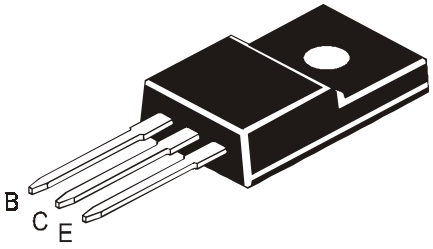
From Junction to Case	$R_{th\ (j\text{-}c)**}$	3.2	ºC/W
From Junction to Ambient	$R_{th\ (j\text{-}a)}$	62.5	ºC/W
Lead Temperature for Soldering Purpose	T_L	260	ºC

****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% ,Ta=25ºC; Pulse Test: Pulse Width ≤300µs, Duty Cycle≤2%)

(2) Pulse Test : Pulse Width =5ms, Duty Cycle≤10%

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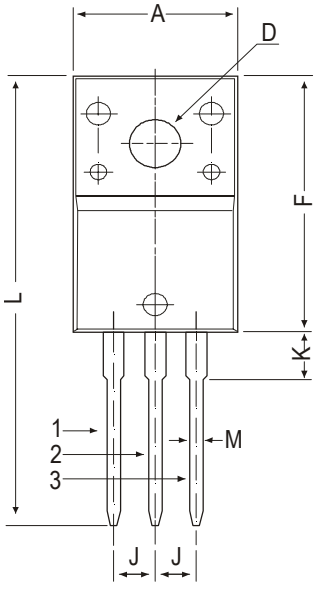
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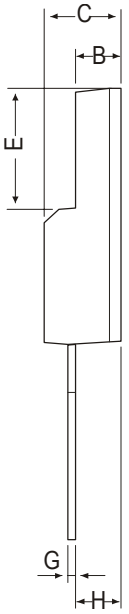
ELECTRICAL CHARACTERISTICS (Tc=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector Emitter sustaining Voltage	$V_{CEO\ (sus)}$ *	I_C=30mA, I_B=0	100		V
Collector Cut off Current	I_{CEO}	V_{CE}=80V, I_B=0		10	µA
	I_{CEX}	V_{CE}=100V, V_{EB}(off)=1.5V		10	µA
		T_C=125ºC			
		V_{CE}=100V, V_{EB}(off)=1.5V		3	mA
	I_{CBO}	V_{CB}=100V, I_E=0		10	µA
Emitter Cut off Current	I_{EBO}	V_{EB}=5V, I_C=0		2	mA
DC Current Gain	h_{FE} *	I_C=3A, V_{CE}=4V	3000	15000	
		I_C=5A, V_{CE}=3V	1000		
		I_C=8A, V_{CE}=4V	200		
		I_C=10A, V_{CE}=3V	100		
Collector Emitter Saturation Voltage	$V_{CE(Sat)}$ *	I_C=3A, I_B=6mA		2	V
		I_C=5A, I_B=0.01A		2	V
		I_C=8A, I_B=80mA		2.5	V
		I_C=10A, I_B=0.1A		3	V
Base Emitter Saturation Voltage	$V_{BE(Sat)}$ *	I_C=5A, I_B=0.01A		2.8	V
		I_C=10A, I_B=0.1A		4.5	V
Base Emitter on Voltage	$V_{BE(on)}$ *	I_C=8A, V_{CE}=4V		2.5	V
DYNAMIC CHARACTERISTICS					
Small Signal Current Gain	$\|h_{fe}\|$	I_C=1A, V_{CE}=5V, f=1MHz	20		
Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz		200	pF
Small Signal Current Gain	h_{fe}	I_C=1A,V_{CE}=5V, f=1kHz	1000		

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

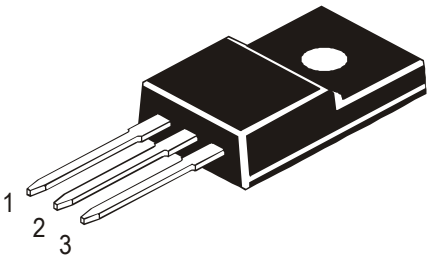
TO-220FP Fully Isolated Plastic Package





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

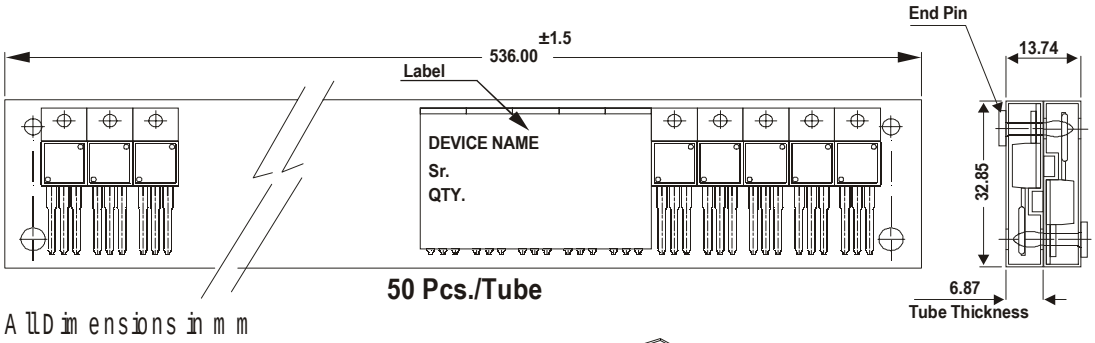
All diminsions in mm.

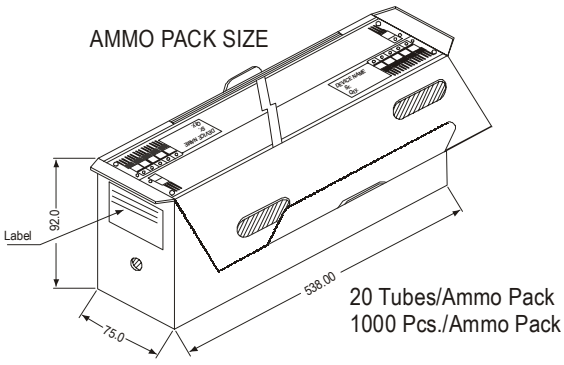


Pin Configuration

1. Base
2. Collector
3. Emitter

TO-220 FP Tube Packing





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 50 pcs/tube	396 gm/200 pcs 135 gm/50 pcs	3" x 7.5" x 7.5" 3.5" x 3.7" x 21.5"	1K 1K	17" x 15" x 13.5" 19" x 19" x 19"	16K 10K	36 kgs 28 kgs

TO-220FP Fully Isolated Plastic Package

Disclaimer

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