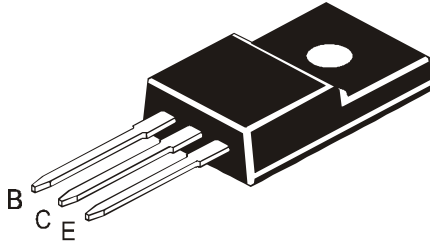


SILICON PLANAR POWER TRANSISTORS

CJF15028 NPN
CJF15029 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}	120	V
Collector Emitter Voltage	V_{CEO}	120	V
Emitter Base Voltage	V_{EBO}	5	V
RMS Isolation Voltage (for 1sec, R.H. <30%, $T_a = 25^\circ\text{C}$)	* 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 @ $T_c=25^\circ\text{C}$	P_D^{**}	36	W
Derate Above 25°C		0.29	W/ $^\circ\text{C}$
Total Power Dissipation @ $T_a=25^\circ\text{C}$	P_D	2	W
Derate Above 25°C		0.016	W/ $^\circ\text{C}$
Operating And Storage Junction Temperature Range	T_j, T_{stg}	- 65 to +150	$^\circ\text{C}$

THERMAL RESISTANCE

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

**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.

* 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%, $T_a=25^\circ\text{C}$; Pulse Test: Pulse Width $\leq 300\text{ms}$, Duty Cycle $\leq 2\%$)

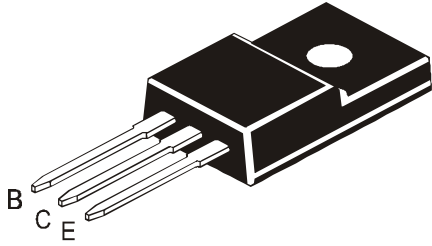
ELECTRICAL CHARACTERISTICS ($T_c=25^\circ\text{C}$ unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector Emitter Sustaining Voltage	* $V_{CEO(SUS)}$	$I_C=10\text{mA}, I_B=0$	120		V
Collector Cut Off Current	I_{CBO}	$V_{CB}=120\text{V}, I_E=0$		10	μA
Collector Cut Off Current	I_{CEO}	$V_{CE}=120\text{V}, I_B=0$		10	μA
Emitter Cut Off Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$		10	μA
DC Current Gain	* h_{FE}	$I_C=0.1\text{A}, V_{CE}=2\text{V}$	40		
		$I_C=2.0\text{A}, V_{CE}=2\text{V}$	40		
		$I_C=3.0\text{A}, V_{CE}=2\text{V}$	40		
		$I_C=4.0\text{A}, V_{CE}=2\text{V}$	20		

* Pulse Test: Pulse Width $\leq 300\text{ms}$, Duty Cycle $\leq 2\%$

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TO-220FP Fully Isolated
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ELECTRICAL CHARACTERISTICS ($T_c=25^\circ\text{C}$ unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector Emitter Saturation Voltage	$*V_{CE(sat)}$	$I_C=1\text{A}, I_B=0.1\text{A}$		0.5	V
Base Emitter On Voltage	$V_{BE(on)}^*$	$I_C=1.0\text{A}, V_{CE}=2\text{V}$		1.0	V

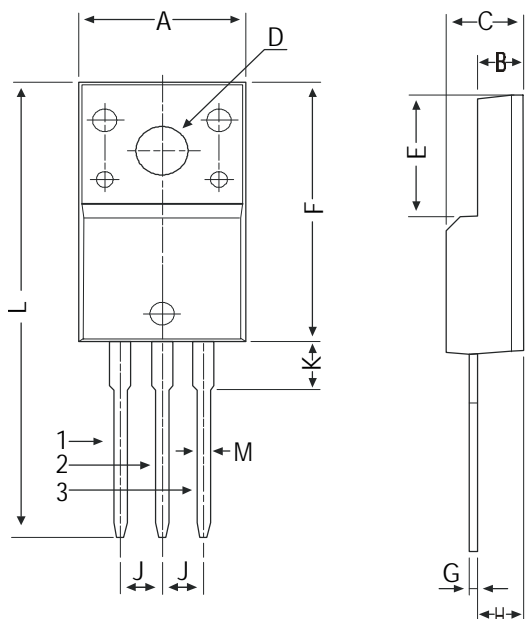
DYNAMIC CHARACTERISTICS

**Current Gain - Bandwidth Product	f_T	$I_C=500\text{mA}, V_{CE}=10\text{V}$ $f_{test}=10\text{MHz}$	30		MHz
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* Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

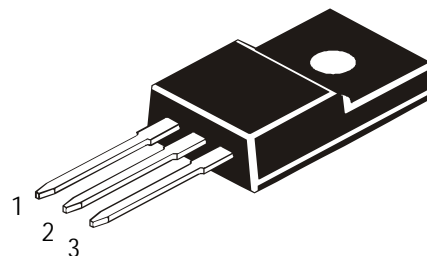
** $f_T = |h_{fe}| f_{test}$

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

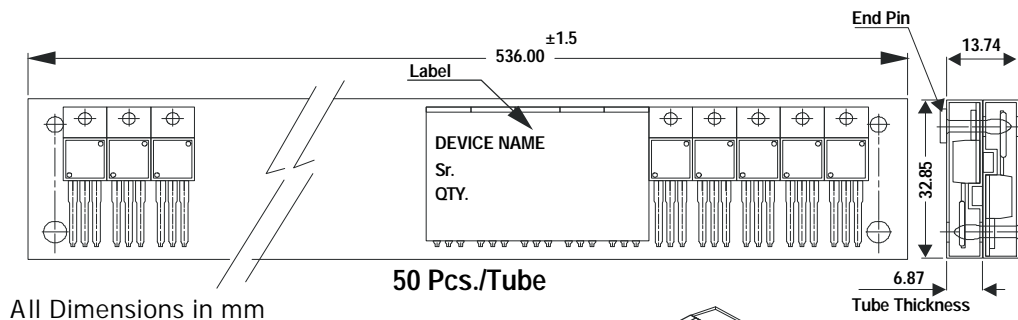
All dimensions in mm.



Pin Configuration

1. Base
2. Collector
3. Emitter

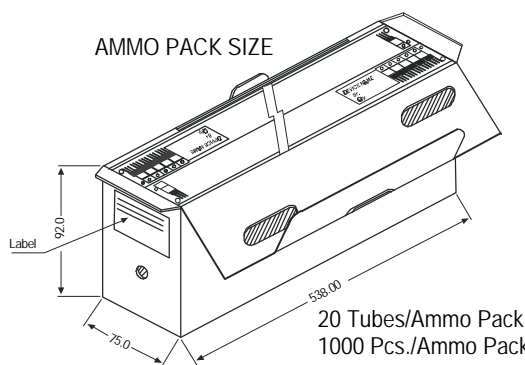
TO-220 FP Tube Packing



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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