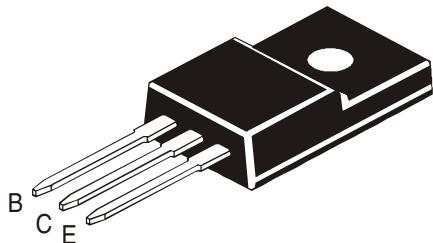


**NPN PLANAR POWER DARLINGTON TRANSISTOR**

**CFD1025**
**TO-220FP Fully Isolated  
Plastic Package**
**Power Darlington for use in Linear Switching Applications**
**ABSOLUTE MAXIMUM RATINGS**

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Base Voltage	$V_{CBO}$	200	V
Collector Emitter Voltage	$V_{CEO}$	150	V
Emitter Base Voltage	$V_{EBO}$	7.0	V
Collector Current DC	$I_C$	8.0	
Collector Current Peak	$I_{CP}$	12.0	A
Base Current DC	$I_B$	0.5	
Base Current Peak	$I_{BP}$	1.0	A
Power Dissipation @ $T_c=25^\circ\text{C}$	$P_D$	35	W
Junction Temperature	$T_j$	+150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

**THERMAL RESISTANCE**

Junction to Case	$R_{th(j-c)}$	2.5	$^\circ\text{C/W}$
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**ELECTRICAL CHARACTERISTICS ( $T_c=25^\circ\text{C}$ )**

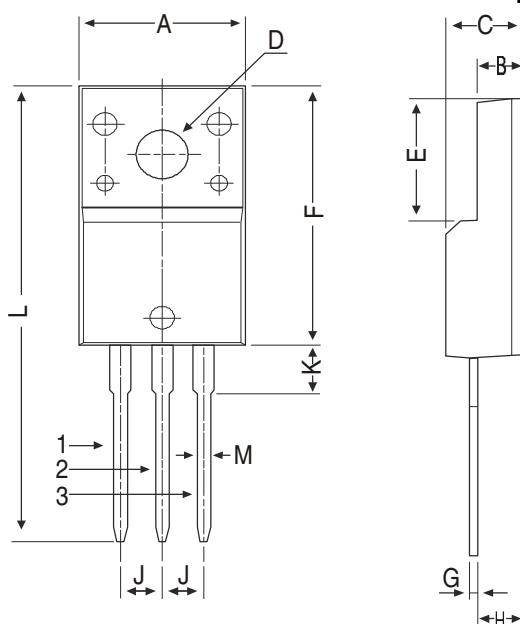
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Cut Off Current	$I_{CBO}$	$V_{CB}=200\text{V}, I_E=0$			0.1	mA
	$I_{CEO}$	$V_{CE}=150\text{V}, I_B=0$			0.1	mA
Emitter Cut Off Current	$I_{EBO}$	$V_{EB}=7\text{V}, I_C=0$			5.0	mA
DC Current Gain	$h_{FE}$	$V_{CE}=3\text{V}, I_C=5\text{A}$	1,500		30,000	
Collector Emitter Saturation Voltage	$V_{CE(\text{sat})}$	$I_C=5\text{A}, I_B=10\text{mA}$			1.5	V
Base Emitter Saturation Voltage	$V_{BE(\text{sat})}$	$I_C=5\text{A}, I_B=10\text{mA}$			2.0	V
Transition frequency	$f_T$	$V_{CE}=10\text{V}, I_C=0.8\text{A}$		50		MHz

**SWITCHING TIME**

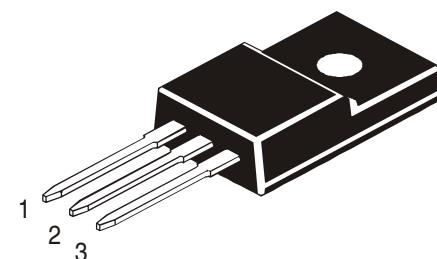
Turn On Time	$t_{on}$	$I_{B1}=I_{B2}=10\text{mA}, I_C=5\text{A}, R_L=5\Omega, V_{BB2}=4\text{V}$	2	$\mu\text{s}$
Storage Time	$t_s$		8	$\mu\text{s}$
Fall Time	$t_f$		5	$\mu\text{s}$

## TO-220FP Fully Isolated Plastic Package

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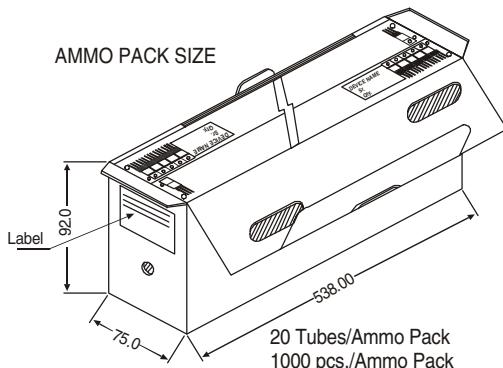
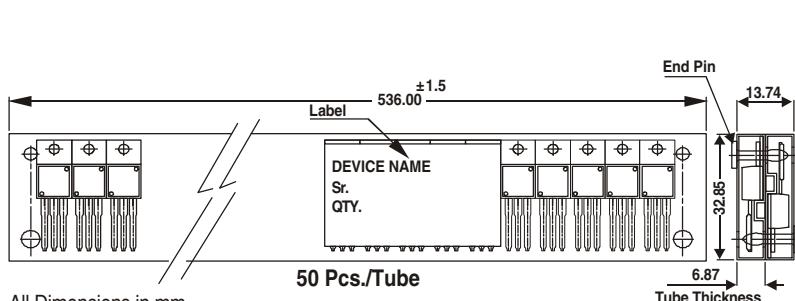


DIM	MIN	MAX
A	9.96	10.36
B	2.60	3.00
C	4.50	4.90
D	3.10	3.30
E	7.90	8.20
F	16.87	17.27
G	0.45	0.50
H	2.56	2.96
J	2.34	2.74
K	—	3.08
L	—	30.05
M	—	0.80

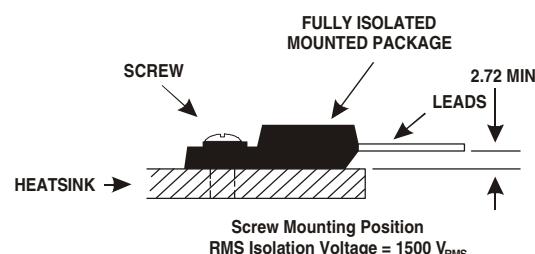
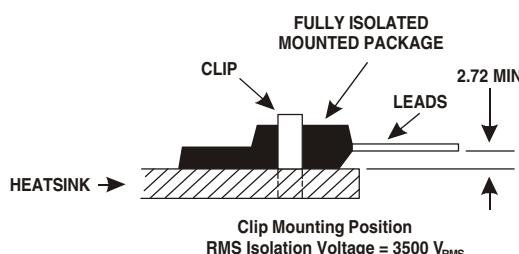


All dimensions in mm.

## TO-220 FP Tube Packing



## Mounting Option for TO-220FP



All dimensions in mm

## 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

### **Disclaimer**

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CDIL is a registered Trademark of  
Continental Device India Limited

C-120 Naraina Industrial Area, New Delhi 110 028, India.

Telephone + 91-11-2579 6150, 5141 1112 Fax + 91-11-2579 5290, 5141 1119  
e-mail [email@cdil.com](mailto:email@cdil.com) [www.cdilsemi.com](http://www.cdilsemi.com)