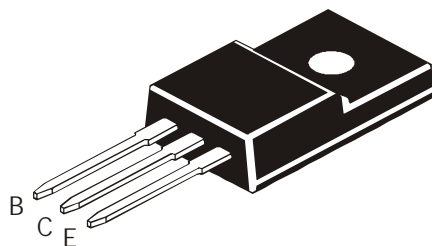


## NPN PLANAR POWER DARLINGTON TRANSISTOR

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	A
Collector Current Peak	$I_{CP}$	12.0	A
Base Current DC	$I_B$	0.5	A
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 ( $T_c=25^\circ\text{C}$ )

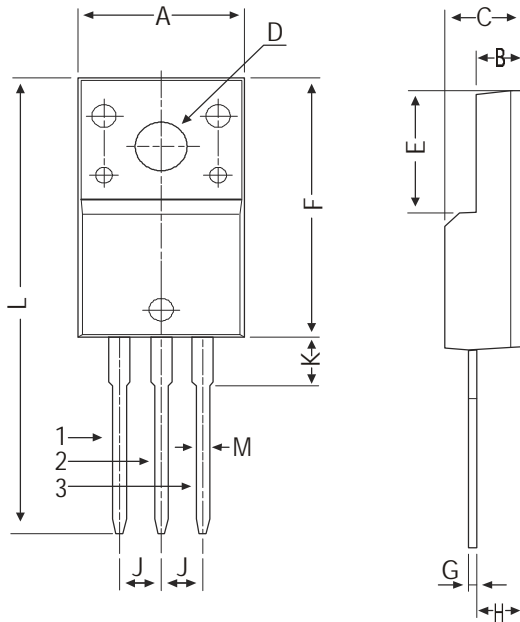
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Cut Off Current	$I_{CBO}$	$V_{CB}=200\text{V}, I_E=0$			0.1	mA
	$I_{CEO}$	$V_{CE}=150\text{V}, I_B=0$			0.1	mA
Emitter Cut Off Current	$I_{EBO}$	$V_{EB}=7\text{V}, I_C=0$			5.0	mA
DC Current Gain	$h_{FE}$	$V_{CE}=3\text{V}, I_C=5\text{A}$	1,500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

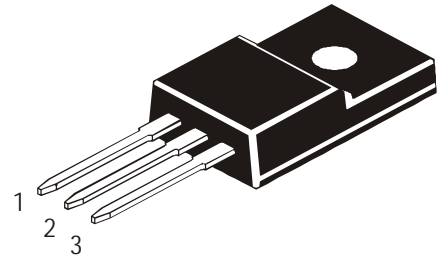
## TO-220FP Fully Isolated Plastic Package

### 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

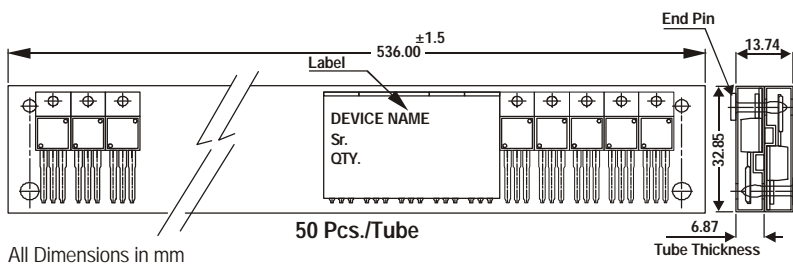
All dimensions in mm.



#### Pin Configuration

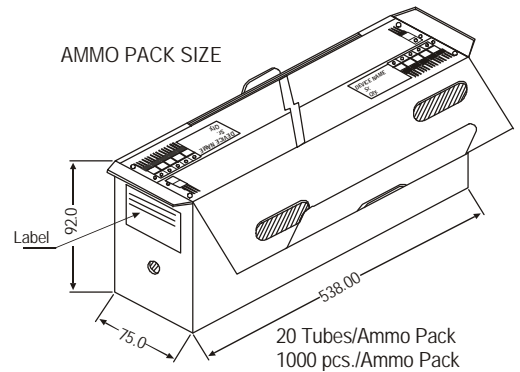
1. Base
2. Collector
3. Emitter

### TO-220 FP Tube Packing

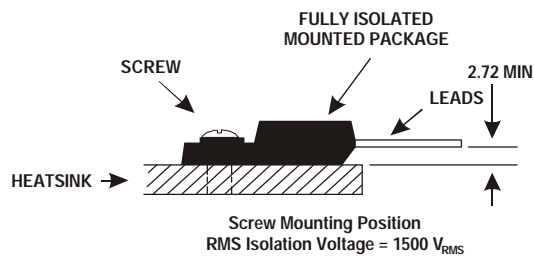
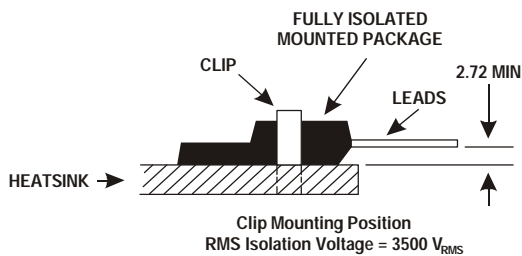


All Dimensions in mm

#### AMMO PACK SIZE



### 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	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

**TO-220FP Fully Isolated  
Plastic Package****Disclaimer**

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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