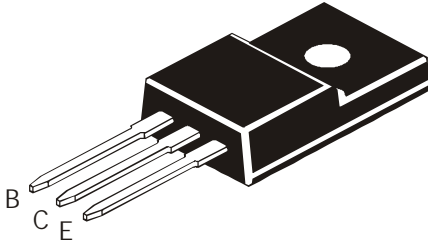


NPN PLANAR POWER DARLINGTON TRANSISTOR

CFD1025



TO-220FP Fully Isolated
Plastic Package

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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 ($T_c=25^\circ\text{C}$)

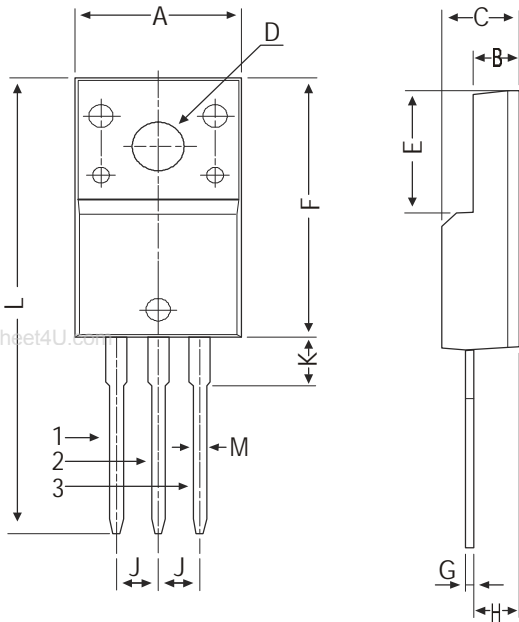
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Cut Off Current	I_{CBO}	$V_{CB}=200\text{V}, I_E=0$			0.1	mA
	I_{CEO}	$V_{CE}=150\text{V}, I_B=0$			0.1	mA
Emitter Cut Off Current	I_{EBO}	$V_{EB}=7\text{V}, I_C=0$			5.0	mA
DC Current Gain	h_{FE}	$V_{CE}=3\text{V}, I_C=5\text{A}$	1,500		30,000	
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	μs
Storage Time	t_s				8	μs
Fall Time	t_f				5	μs

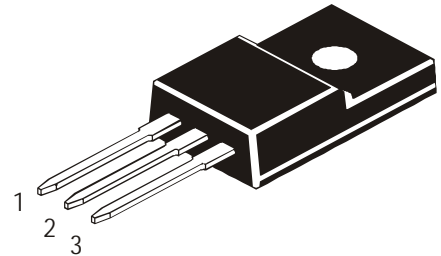
TO-220FP Fully Isolated Plastic Package

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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

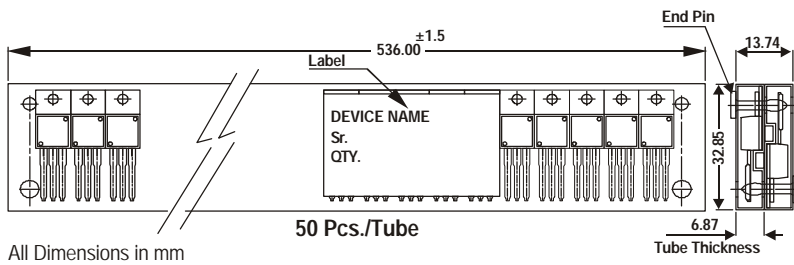
All dimensions in mm.



Pin Configuration

- 1. Base
- 2. Collector
- 3. Emitter

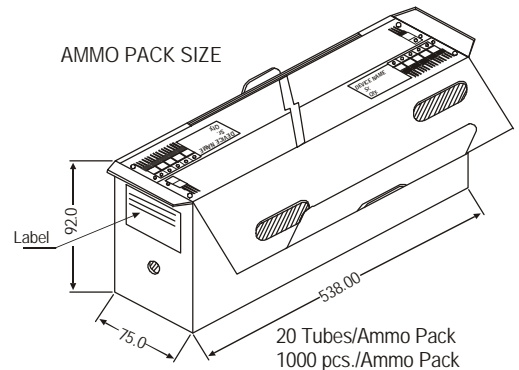
TO-220 FP Tube Packing



All Dimensions in mm

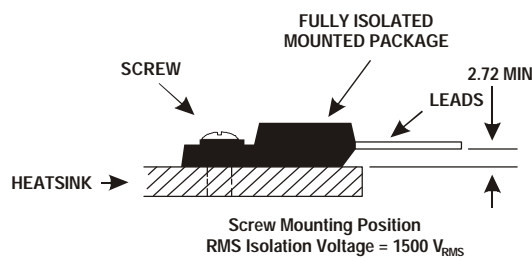
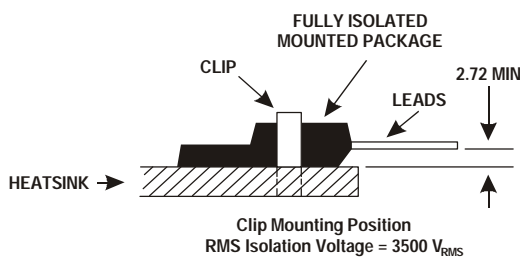
50 Pcs./Tube

AMMO PACK SIZE



20 Tubes/Ammo Pack
1000 pcs./Ammo Pack

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

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