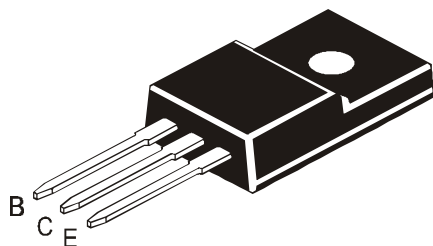


## NPN SILICON PLANAR POWER TRANSISTOR

## CFD2374, CFD2374A



TO-220FP Fully Isolated  
Plastic Package

Complementary CFB1548, CFB1548A

### ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	CFD2374	CFD2374A	UNIT
Collector Base Voltage	$V_{CBO}$	60	80	V
Collector Emitter Voltage	$V_{CEO}$	60	80	V
Emitter Base Voltage	$V_{EBO}$	6		V
RMS Isolation Voltage (for 1sec, R.H. <30%, $T_a = 25^\circ\text{C}$ )	$V_{ISOL}$ (a)	3500		$V_{RMS}$
		1500		$V_{RMS}$
Collector Current Peak	$I_{CP}$	5		A
Collector Current	$I_C$	3		A
Collector Power Dissipation @ $T_c = 25^\circ\text{C}$ @ $T_a = 25^\circ\text{C}$	$P_C$	25		W
		2		W
Junction Temperature	$T_j$	150		$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to +150		$^\circ\text{C}$

\*\* 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  $\leq 300\mu\text{s}$ , Duty Cycle  $\leq 2\%$ )

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

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Cut Off Current	$I_{CES}$	$V_{CE} = 60\text{V}$ , $V_{BE} = 0$ <b>CFD2374</b>			200	$\mu\text{A}$
		$V_{CE} = 80\text{V}$ , $V_{BE} = 0$ <b>CFD2374A</b>			200	$\mu\text{A}$
Collector Cut Off Current	$I_{CEO}$	$V_{CE} = 30\text{V}$ , $I_B = 0$ <b>CFD2374</b>			300	$\mu\text{A}$
		$V_{CE} = 60\text{V}$ , $I_B = 0$ <b>CFD2374A</b>			300	$\mu\text{A}$
Emitter Cut Off Current	$I_{EBO}$	$V_{EB} = 6\text{V}$ , $I_C = 0$			1.0	mA
Collector Emitter Voltage	$V_{CEO}$	$I_C = 30\text{mA}$ , $I_B = 0$ <b>CFD2374</b>	60			V
		<b>CFD2374A</b>	80			V
DC Current Gain	$h_{FE}^*$	$V_{CE} = 4\text{V}$ , $I_C = 1\text{A}$	70		250	
	$h_{FE}$	$V_{CE} = 4\text{V}$ , $I_C = 3\text{A}$	10			
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 3\text{A}$ , $I_B = 0.375\text{A}$			1.2	V
Base Emitter On Voltage	$V_{BE(on)}$	$V_{CE} = 4\text{V}$ , $I_C = 3\text{A}$			1.8	V
Transition Frequency	$f_T$	$V_{CE} = 10\text{V}$ , $I_C = 0.5\text{A}$ , $f = 10\text{MHz}$		30		MHz
Turn On Time	$t_{on}$	$I_C = 1\text{A}$ , $I_{B1} = 0.1\text{A}$ , $I_{B2} = -0.1\text{A}$ , $V_{CC} = 50\text{V}$		0.5		$\mu\text{s}$
Storage Time	$t_{stg}$			2.5		$\mu\text{s}$
Fall Time	$t_f$			0.4		$\mu\text{s}$

$h_{FE}^*$  Classification

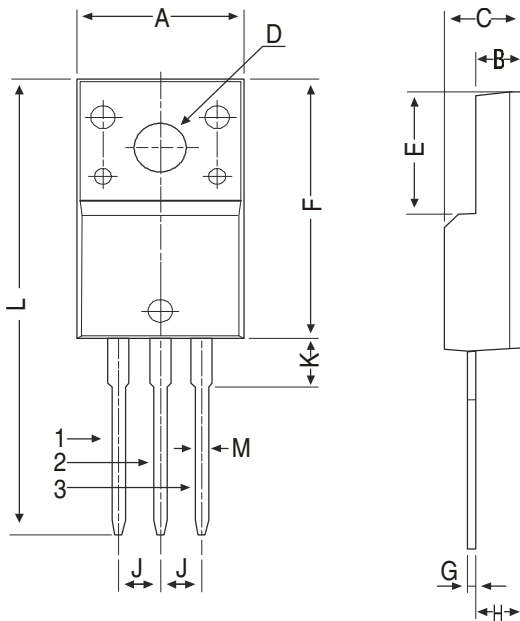
Q : 70 - 150

P : 120 - 250

## CFD2374, CFD2374A

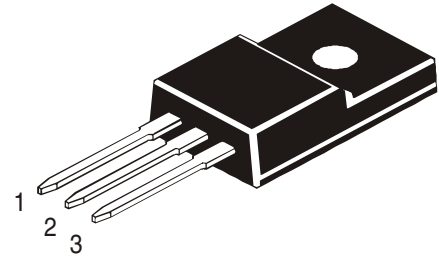
### TO-220FP Fully Isolated Plastic Package

#### TO-220FP Fully Isolated Plastic Package



DIM	MIN	MAX
A	9.80	10.36
B	2.50	3.00
C	4.30	4.90
D	3.10	3.40
E	6.50	8.20
F	14.80	17.27
G	0.40	0.70
H	2.50	2.96
J	2.34	2.74
K	—	4.70
L	—	30.05
M	0.6	0.90

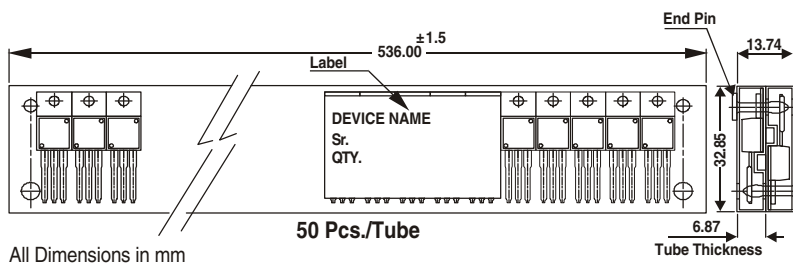
All dimensions in mm.



#### Pin Configuration

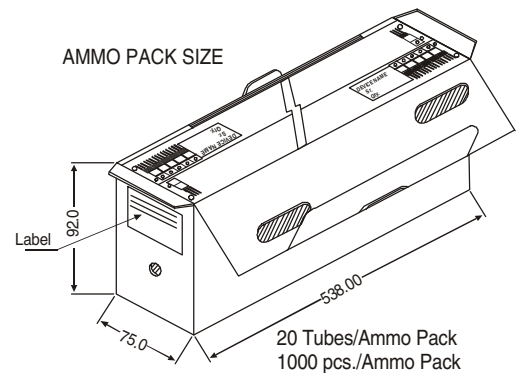
1. Base
2. Collector
3. Emitter

#### TO-220 FP Tube Packing



All Dimensions in mm

#### AMMO PACK SIZE



#### 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****Component Disposal Instructions**

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

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