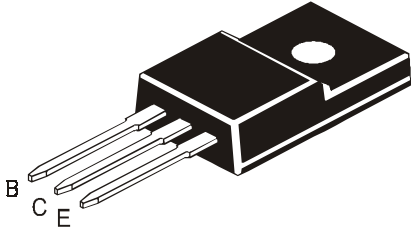


SILICON PLANAR POWER DARLINGTON TRANSISTORS



NPN	PNP
CJF100	CJF105
CJF101	CJF106
CJF102	CJF107

TO-220FP Fully Isolated Plastic Package

Power Darlington for Linear and Switching Applications

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	CJF100 CJF105	CJF101 CJF106	CJF102 CJF107	UNIT
Collector Base Voltage	V_{CBO}	60	80	100	V
Collector Emitter Voltage	V_{CEO}	60	80	100	V
Emitter Base Voltage	V_{EBO}	5.0			V
RMS Isolation Voltage (for 1sec, R.H. <30%, $T_A=25^\circ\text{C}$)	(1) V_{ISOL} (a) (b)	3500 1500			V_{RMS}
Collector Current - Continuous	I_C	8.0			A
Peak	I_{CM}	15			
Base Current	I_B	1.0			A
Total Power Dissipation @ $T_C=25^\circ\text{C}$	P_{tot}	80			W
Derate Above 25°C		0.64			W/ $^\circ\text{C}$
Total Power Dissipation @ $T_A=25^\circ\text{C}$	P_{tot}	2.0			W
Derate Above 25°C		0.016			W/ $^\circ\text{C}$
Operating And Storage Junction Temperature Range	T_j, T_{stg}	- 65 to +150			$^\circ\text{C}$

(1) 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 $\leq 2\%$)

THERMAL RESISTANCE

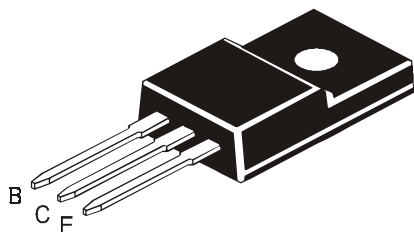
Characteristics	SYMBOL	MAX	UNIT
From Junction to Ambient	$R_{th(j-a)}$	62.5	$^\circ\text{C}/\text{W}$
From Junction to Case	$R_{th(j-c)}$	1.56	$^\circ\text{C}/\text{W}$

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

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector Emitter Sustaining Voltage	$V_{CEO(sus)}$ *	$I_C=30\text{mA}, I_B=0$ CJF100/105 CJF101/106 CJF102/107	60 80 100	- - -	V V V
Collector Cut Off Current	I_{CEO}	$V_{CE} = 1/2 \text{ Rated } V_{CEO}, I_B=0$	-	50	μA
	I_{CBO}	$V_{CB} = \text{Rated } V_{CBO}, I_E=0$	-	50	μA
Emitter Cut Off Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$	-	8.0	mA

SILICON PLANAR POWER DARLINGTON TRANSISTORS

NPN	PNP
CJF100	CJF105
CJF101	CJF106
CJF102	CJF107



TO-220FP Fully Isolated Plastic Package

ELECTRICAL CHARACTERISTICS (T_c=25°C unless specified otherwise)

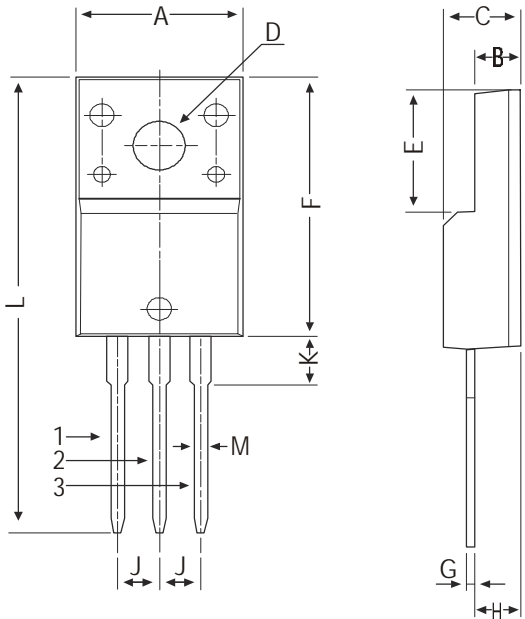
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector Emitter Saturation Voltages	V _{CE(sat)} *	I _C =3A, I _B =6mA	-	2.0	V
		I _C =8A, I _B =80mA	-	2.5	
Base Emitter On Voltage	V _{BE(on)} *	I _C =8A, V _{CE} =4V	-	2.8	V
DC Current Gain	h _{FE} *	I _C =3A, V _{CE} =4V	1000	20000	
		I _C =8A, V _{CE} =4V	200	-	

DYNAMIC CHARACTERISTICS

Small Signal Current Gain	h _{fe}	I _C =3A, V _{CE} =4V, f=1MHz	4.0	-	
Output Capacitance	C _o	V _{CB} =10V, I _E =0, f=0.1MHz	-	300	pF
			PNP	-	200
Forward Voltage of Commutation Diode	V _F *	I _F = - I _C =10A, I _B =0	-	6.0	V

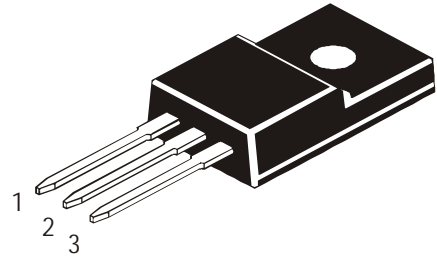
* Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2 %

TO-220FP Fully Isolated Plastic Package



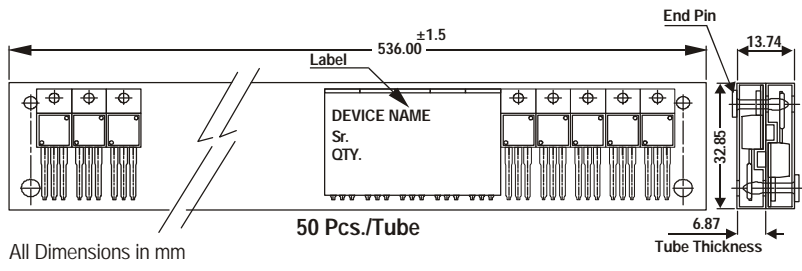
DIM	MIN	MAX
A	9.80	10.36
B	2.50	3.00
C	4.30	4.90
D	3.10	3.40
E	6.50	8.20
F	14.80	17.27
G	0.40	0.70
H	2.50	2.96
J	2.34	2.74
K	—	4.70
L	—	30.05
M	0.6	0.90

All diminsions in mm.



Pin Configuration
 1. Base
 2. Collector
 3. Emitter

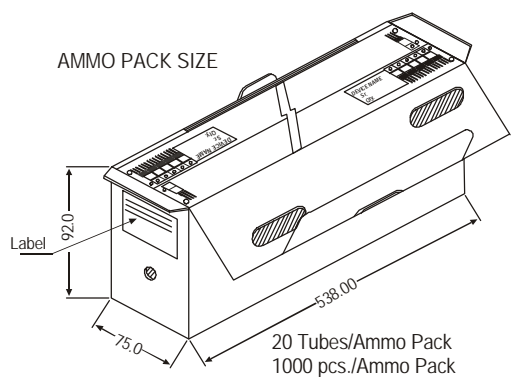
TO-220 FP Tube Packing



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

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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