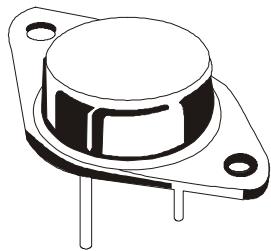


NPN SILICON PLANAR POWER TRANSISTOR

2N3772



TO-3
Metal Can Package

Designed for Linear Amplifiers, Series Pass Regulators, and Inductive Switching Applications.

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNITS
Collector Base Voltage	V_{CBO}	100	V
Collector Emitter Voltage	V_{CEO}	60	V
Collector Emitter Voltage	V_{CEX}	80	V
Emitter Base Voltage	V_{EBO}	7	V
Collector Current Continuous	I_C	20	A
Peak		30	
Base Current Continuous	I_B	5	A
Peak		15	
Power Dissipation @ $T_c=25^\circ\text{C}$	P_D	150	W
Derate Above 25°C		0.855	W/ $^\circ\text{C}$
Operating And Storage Junction Temperature Range	T_j, T_{stg}	- 65 to +200	$^\circ\text{C}$

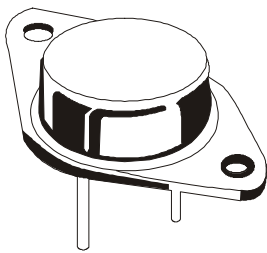
THERMAL RESISTANCE

Junction to Case	$R_{th(j-c)}$	0.170	$^\circ\text{C/W}$
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ELECTRICAL CHARACTERISTICS ($T_c=25^\circ\text{C}$ unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
Collector Emitter Sustaining Voltage	$V_{CEO(sus)}^*$	$I_C=0.2\text{A}, I_B=0$	60		V
Collector Emitter Sustaining Voltage	$V_{CEX(sus)}$	$I_C=0.2\text{A}, R_{BE}=100\Omega, V_{EB}(\text{off})=1.5\text{V}$	80		V
Collector Emitter Sustaining Voltage	$V_{CER(sus)}$	$I_C=0.2\text{A}, R_{BE}=100\Omega,$	70		V
Collector Cut Off Current	I_{CEO}	$V_{CE}=50\text{V}, I_B=0$		10	mA
Collector Cut Off Current	I_{CEV}	$V_{CE}=100\text{V}, V_{EB}(\text{off})=1.5\text{V}$ $T_c=150^\circ\text{C}$ $V_{CE}=45\text{V}, V_{EB}(\text{off})=1.5\text{V}$		5.0 10	mA
Collector Cut Off Current	I_{CBO}	$V_{CB}=100\text{V}, I_E=0$		5.0	mA
Emitter Cut Off Current	I_{EBO}	$V_{BE}=7\text{V}, I_C=0$		5.0	mA
DC Current Gain	h_{FE}^*	$I_C=10\text{A}, V_{CE}=4\text{V}$ $I_C=20\text{A}, V_{CE}=4\text{V}$	15 5	60	
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10\text{A}, I_B=1\text{A}$ $I_C=20\text{A}, I_B=4\text{A}$		1.4 4.0	V
Base Emitter On Voltage	$V_{BE(on)}$	$I_C=10\text{A}, V_{CE}=4\text{V}$		2.2	V

NPN SILICON PLANAR POWER TRANSISTOR



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TO-3
Metal Can Package

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

Second Breakdown

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
Second Breakdown Energy with Base Forward Biased	I _S /b	V _{CE} =60V, t=1.0 s, Nonrepetitive	2.5		A

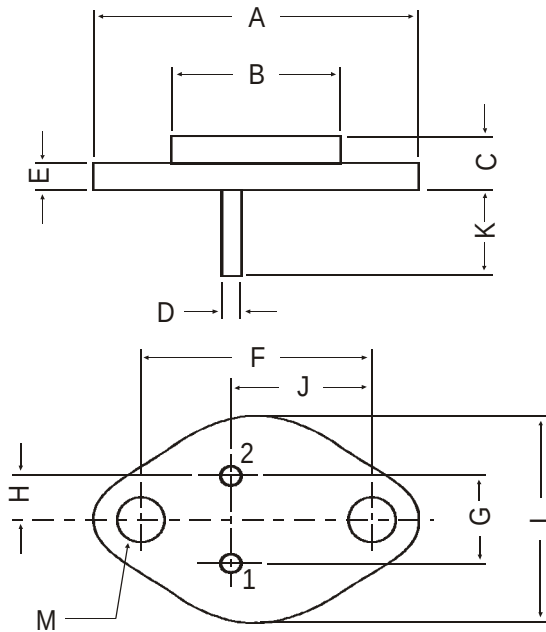
Dynamic Characteristics

Current Gain - Bandwidth Product	f _T	I _C =1.0A, V _{CE} =4V, f=50KHz	0.2		MHz
Small Signal Current Gain	h _{fe}	I _C =1A, V _{CE} =4V, f=1KHz	40		

*Pulse Test: Pulse Width ≤300ms, Repetitive Rate 60 cps.

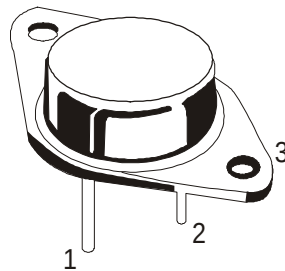
TO-3
Metal Can Package

TO-3 Metal Can Package



DIM	MIN.	MAX.
A	—	39.37
B	—	22.22
C	6.35	8.50
D	0.96	1.09
E	—	1.77
F	29.90	30.40
G	10.69	11.18
H	5.20	5.72
J	16.64	17.15
K	11.15	12.25
L	—	26.67
M	3.84	4.19

All dimensions in mm.



PIN CONFIGURATION

1. BASE
2. EMITTER
3. COLLECTOR

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-3	100 pcs/pkt	1.3 kg/100 pcs	12.5" x 8" x 1.8"	0.1K	17" x 11.5" x 21"	2K	27.5 kgs

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 is 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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