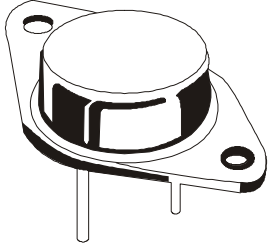


**NPN SILICON PLANAR POWER TRANSISTOR**

**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 $25^\circ\text{C}$		0.855	W/ $^\circ\text{C}$
Operating And Storage Junction Temperature Range	$T_j, T_{stg}$	- 65 to +200	$^\circ\text{C}$

**THERMAL RESISTANCE**

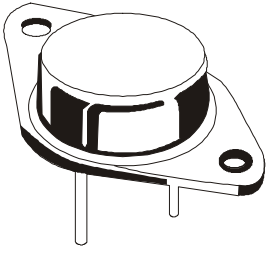
Junction to Case	$R_{th(j-c)}$	0.170	$^\circ\text{C}/\text{W}$
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**ELECTRICAL CHARACTERISTICS ( $T_c=25^\circ\text{C}$  unless specified otherwise)**

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	$I_{CEV}$	$V_{CE}=100\text{V}, V_{EB}(\text{off})=1.5\text{V}$		5.0	mA
		$T_c=150^\circ\text{C}$ $V_{CE}=45\text{V}, V_{EB}(\text{off})=1.5\text{V}$		10	
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

2N3772



TO-3  
Metal Can Package

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

### Second Breakdown

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
Second Breakdown Energy with Base Forward Biased	$I_S/b$	$V_{CE}=60\text{V}, t=1.0\text{ s}, \text{Nonrepetitive}$	2.5		A

### Dynamic Characteristics

Current Gain - Bandwidth Product	$f_T$	$I_C=1.0\text{A}, V_{CE}=4\text{V}, f=50\text{KHz}$	0.2		MHz
Small Signal Current Gain	$h_{fe}$	$I_C=1\text{A}, V_{CE}=4\text{V}, f=1\text{KHz}$	40		

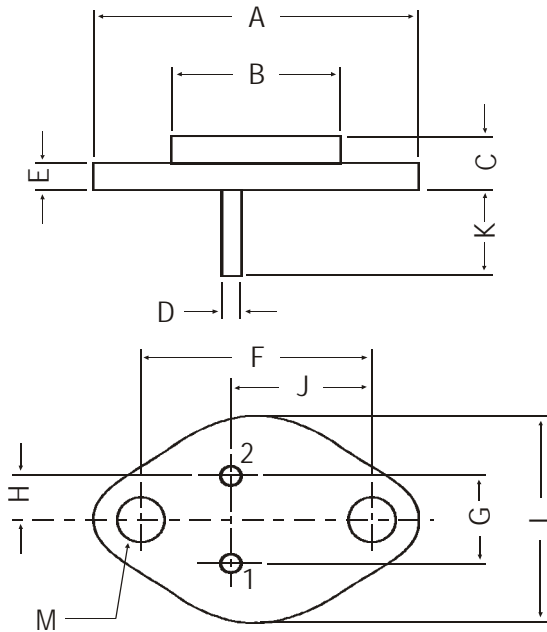
\*Pulse Test: Pulse Width  $\leq 300\text{ms}$ , Repetitive Rate 60 cps.

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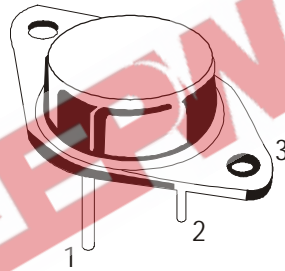
TO-3  
Metal Can Package

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