



NPN 2N3773

HIGH POWER TRANSISTOR

The 2N3773 is silicon planar NPN transistor in Jedec TO-3 metal case. They are intended for linear amplifiers and inductive switching applications. Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
V_{CEO}	Collector-Emitter Voltage	$I_B = 0$	140	V
V_{CBO}	Collector-Base Voltage	$I_E = 0$	160	V
V_{EBO}	Emitter-Base Voltage	$I_C = 0$	7	V
V_{CEX}	Collector-Emitter Voltage	$V_{BE} = -1.5V$	160	V
I_C	Collector Current		16	A
I_{CM}	Collector Peak Current		30	A
I_B	Base Current		4	A
I_{BM}	Base Peak Current		15	A
P_t	Total Power Dissipation	@ $T_C = 25^\circ$	150	W
T_J	Junction Temperature		150	$^\circ C$
T_{Stg}	Storage Temperature		-65 to +200	$^\circ C$

ELECTRICAL CHARACTERISTICS

$T_C = 25^\circ C$ unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage (*)	$I_C = 200 \text{ mA}, I_B = 0$	140	-	-	V
I_{CEO}	Collector Cutoff Current	$V_{CE} = 140 \text{ V}, I_B = 0$	-	-	2	mA
I_{CEX}	Collector Cutoff Current	$V_{CE} = 140 \text{ V}, V_{BE} = -1.5V$	-	-	2	mA
		$V_{CE} = 140 \text{ V}, V_{BE} = -1.5V$ $T_{case} = 150^\circ C$	-	-	10	
I_{EBO}	Emitter Cutoff Current	$V_{EB} = 7 \text{ V}, I_C = 0$	-	-	5	mA
h_{FE}	DC Current Gain (*)	$I_C = 8 \text{ A}, V_{CE} = 4 \text{ V}$	15	-	60	-
		$I_C = 16 \text{ A}, V_{CE} = 4 \text{ V}$	5	-	-	
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C = 8 \text{ A}, I_B = 800 \text{ mA}$	-	-	1.4	V
		$I_C = 16 \text{ A}, I_B = 3.2 \text{ A}$	-	-	4	
V_{BE}	Base-Emitter Voltage (*)	$I_C = 8 \text{ A}, V_{CE} = 4 \text{ V}$	-	-	2.2	V
$I_{S/B}$	Second breakdown collector current	$V_{CE} = 100 \text{ V}, t_s = 1 \text{ s}$	1.5	-	-	A

(*) Pulse Duration = 300 μs , Duty Cycle $\leq 2\%$



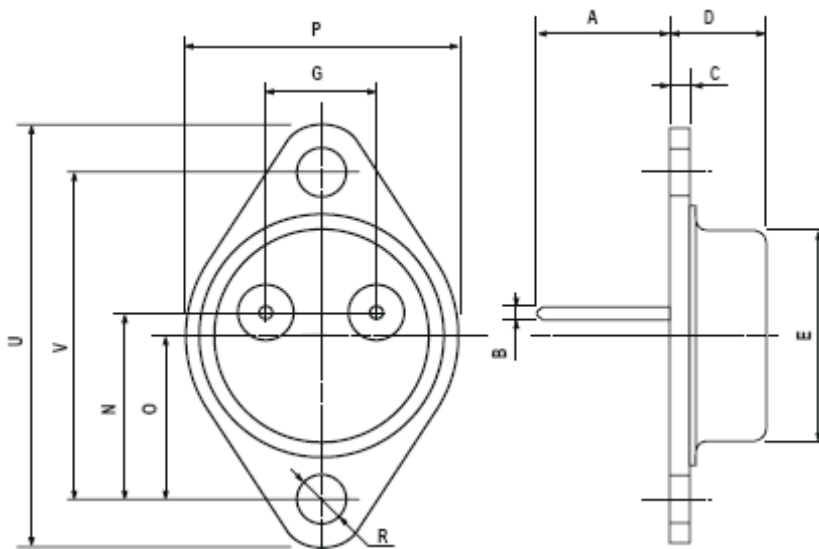
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THERMAL CHARACTERISTICS

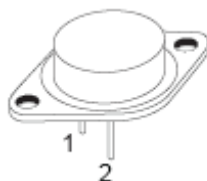
Symbol	Ratings	Value	Unit
R_{thJC}	Thermal Resistance, Junction to Case	1.17	$^{\circ}C/W$

MECHANICAL DATA CASE TO-3

DIMENSIONS (mm)		
	min	max
A	11	13.10
B	0.97	1.15
C	1.5	1.65
D	8.32	8.92
F	19	20
G	10.70	11.1
N	16.50	17.20
P	25	26
R	4	4.09
U	38.50	39.30
V	30	30.30



Pin 1 :	Base
Pin 2 :	Emitter
Case :	Collector



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