

TO-220 Plastic Package

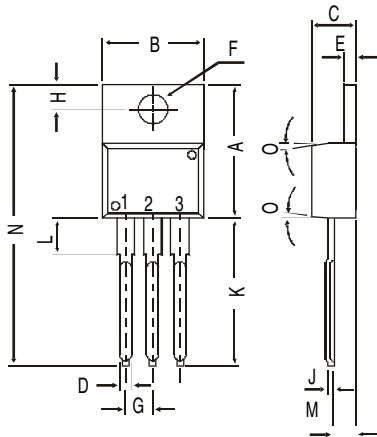
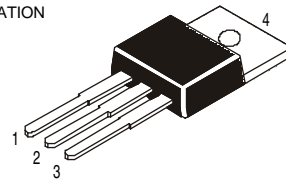
2N6288

2N6288 NPN PLASTIC POWER TRANSISTOR

Complementary 2N6111

General Purpose Amplifier and Switching Applications

PIN CONFIGURATION
 1. BASE
 2. COLLECTOR
 3. EMITTER
 4. COLLECTOR



All dimensions in mm.

DIM	MIN.	MAX.
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D		0.90
E	1.15	1.40
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
J		0.56
K	12.70	14.73
L	2.80	4.07
M	2.03	2.92
N		31.24
O	DEG 7	

ABSOLUTE MAXIMUM RATINGS

Collector-base voltage (open emitter)	V_{CB0}	max.	40 V
Collector-emitter voltage (open base)	V_{CEO}	max.	30 V
Collector current	I_C	max.	7.0 A
Total power dissipation up to $T_C = 25^\circ\text{C}$	P_{tot}	max.	40 W
Junction temperature	T_j	max.	150 °C
Collector-emitter saturation voltage	V_{CEsat}	max.	1.0 V
$I_C = 3\text{ A}; I_B = 0.3\text{ A}$			
D.C. current gain	h_{FE}	min.	30
$I_C = 3\text{ A}; V_{CE} = 4\text{ V}$		max.	150

RATINGS (at $T_A=25^\circ\text{C}$ unless otherwise specified)

Limiting values

Collector-base voltage (open emitter)	V_{CB0}	max.	40 V
Collector-emitter voltage (open base)	V_{CEO}	max.	30 V
Emitter-base voltage (open collector)	V_{EBO}	max.	5.0 V
Collector current	I_C	max.	7.0 A
Collector current (Peak)	I_C	max.	10 A

Base current	I_B	max.	3.0 A
Total power dissipation up to $T_C = 25^\circ\text{C}$	P_{tot}	max.	40 W
Derate above 25°C		max.	$0.32 \text{ W}/^\circ\text{C}$
Junction temperature	T_j	max.	150°C
Storage temperature	T_{stg}		-65 to $+150^\circ\text{C}$
THERMAL RESISTANCE			
From junction to case	$R_{th\ j-c}$	=	$3.125^\circ\text{C}/\text{W}$
CHARACTERISTICS			
$T_{amb} = 25^\circ\text{C}$ unless otherwise specified			
Collector cutoff current			
$I_B = 0; V_{CE} = 20 \text{ V}$	I_{CEO}	max.	1.0 mA
$V_{BE} = 1.5 \text{ V}; V_{CE} = 40 \text{ V}$	I_{CEX}	max.	0.1 mA
$V_{BE} = 1.5 \text{ V}; V_{CE} = 30 \text{ V}; T_C = 150^\circ\text{C}$	I_{CEX}	max.	2.0 mA
Emitter cut-off current			
$I_C = 0; V_{EB} = 5 \text{ V}$	I_{EBO}	max.	1 mA
Breakdown voltages			
$I_C = 0.1 \text{ A}; I_B = 0$	$V_{CEO(sus)}^*$	min.	30 V
$I_C = 1 \text{ mA}; I_E = 0$	V_{CBO}	min.	40 V
$I_E = 1 \text{ mA}; I_C = 0$	V_{EBO}	min.	5.0 V
Saturation voltages			
$I_C = 3 \text{ A}; I_B = 0.3 \text{ A}$	V_{CEsat}^*	max.	1.0 V
$I_C = 7 \text{ A}; I_B = 3 \text{ A}$	V_{CEsat}^*	max.	3.5 V
Base emitter on voltage			
$I_C = 3 \text{ A}; V_{CE} = 4 \text{ V}$	$V_{BE(on)}^*$	max.	1.5 V
$I_C = 7 \text{ A}; V_{CE} = 4 \text{ V}$	$V_{BE(on)}^*$	max.	3.0 V
D.C. current gain			
$I_C = 3 \text{ A}; V_{CE} = 4 \text{ V}$	h_{FE}^*	min.	30
		max.	150
$I_C = 7 \text{ A}; V_{CE} = 4 \text{ V}$	h_{FE}^*	min.	2.3
Small signal current gain			
$I_C = 0.5 \text{ A}; V_{CE} = 4 \text{ V}; f = 50 \text{ KHz}$	h_{fe}	min.	20
Output capacitance at $f = 1 \text{ MHz}$			
$I_E = 0; V_{CB} = 10 \text{ V}$	C_o	max.	250 pF
Transition frequency			
$I_C = 0.5 \text{ A}; V_{CE} = 4 \text{ V}; f = 1.0 \text{ MHz}$	$f_T(1)$	min.	4 MHz

* Pulsed: pulse duration $\leq 300 \mu\text{s}$; duty cycle $\leq 2\%$.

(1) $f_T = |h_{fe}| \cdot f_{test}$

Notes

Disclaimer

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Continental Device India Limited

C-120 Naraina Industrial Area, New Delhi 110 028, India.
Telephone + 91-11-2579 6150, 5141 1112 Fax + 91-11-2579 5290, 5141 1119
email@cdil.com www.cdilsemi.com