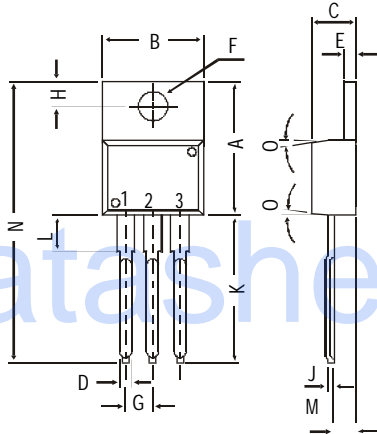
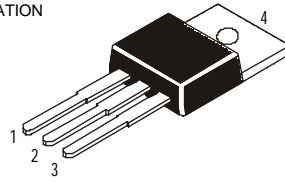


**TO-220 Plastic Package**

**2N6288**

**2N6288 NPN PLASTIC POWER TRANSISTOR**  
 Complementary 2N6111  
 General Purpose Amplifier and Switching Applications

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



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	

All dimensions in mm.

**ABSOLUTE MAXIMUM RATINGS**

Collector-base voltage (open emitter)	$V_{CB0}$	max.	40 V
Collector-emitter voltage (open base)	$V_{CE0}$	max.	30 V
Collector current	$I_C$	max.	7.0 A
Total power dissipation up to $T_C = 25^\circ C$	$P_{tot}$	max.	40 W
Junction temperature	$T_j$	max.	150 °C
Collector-emitter saturation voltage	$V_{CEsat}$	max.	1.0 V
$I_C = 3 A; I_B = 0.3 A$			
D.C. current gain	$h_{FE}$	min.	30
$I_C = 3 A; V_{CE} = 4 V$		max.	150

**RATINGS (at  $T_A=25^\circ C$  unless otherwise specified)**

<b>Limiting values</b>			
Collector-base voltage (open emitter)	$V_{CB0}$	max.	40 V
Collector-emitter voltage (open base)	$V_{CE0}$	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

## 2N6288

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 $25^\circ\text{C}$		max.	0.32 W/°C
Junction temperature	$T_j$	max.	150 °C
Storage temperature	$T_{stg}$		-65 to +150 °C

### THERMAL RESISTANCE

From junction to case	$R_{th\ j-c}$	=	3.125 °C/W
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### CHARACTERISTICS

$T_{amb} = 25^\circ\text{C}$  unless otherwise specified

#### Collector cutoff current

$$I_B = 0; V_{CE} = 20\text{ V}$$

$$V_{BE} = 1.5\text{ V}; V_{CE} = 40\text{ V}$$

$$V_{BE} = 1.5\text{ V}; V_{CE} = 30\text{ V}; T_C = 150^\circ\text{C}$$

$I_{CEO}$	max.	1.0 mA
$I_{CEX}$	max.	0.1 mA
$I_{CEX}$	max.	2.0 mA

#### Emitter cut-off current

$$I_C = 0; V_{EB} = 5\text{ V}$$

$I_{EBO}$	max.	1 mA
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#### Breakdown voltages

$$I_C = 0.1\text{ A}; I_B = 0$$

$$I_C = 1\text{ mA}; I_E = 0$$

$$I_E = 1\text{ mA}; I_C = 0$$

$V_{CEO(sus)}^*$	min.	30 V
$V_{CBO}$	min.	40 V
$V_{EBO}$	min.	5.0 V

#### Saturation voltages

$$I_C = 3\text{ A}; I_B = 0.3\text{ A}$$

$$I_C = 7\text{ A}; I_B = 3\text{ A}$$

$V_{CEsat}^*$	max.	1.0 V
$V_{CEsat}^*$	max.	3.5 V

#### Base emitter on voltage

$$I_C = 3\text{ A}; V_{CE} = 4\text{ V}$$

$$I_C = 7\text{ A}; V_{CE} = 4\text{ V}$$

$V_{BE(on)}^*$	max.	1.5 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
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#### Small signal current gain

$$I_C = 0.5\text{ A}; V_{CE} = 4\text{ V}; f = 50\text{ KHz}$$

$h_{fe}$	min.	20
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#### Output capacitance at $f = 1\text{ MHz}$

$$I_E = 0; V_{CB} = 10\text{ V}$$

$C_o$	max.	250 pF
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#### Transition frequency

$$I_C = 0.5\text{ A}; V_{CE} = 4\text{ V}; f = 1.0\text{ MHz}$$

$f_T(1)$	min.	4 MHz
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\* Pulsed: pulse duration  $\leq 300\ \mu\text{s}$ ; duty cycle  $\leq 2\%$ .

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

## Notes

### 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 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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