

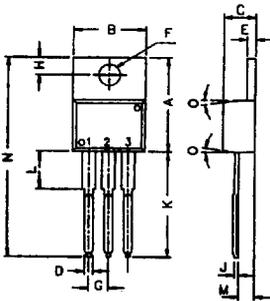
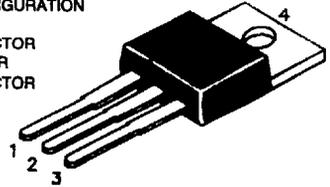
2N6290 NPN PLASTIC POWER TRANSISTOR

Complementary 2N6109

Medium Power Switching and Linear Applications

PIN CONFIGURATION

- 1. BASE
- 2. COLLECTOR
- 3. EMITTER
- 4. COLLECTOR



ALL DIMENSIONS ARE IN M.M.

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	-	6,35
M	2,03	2,92
N	-	31,24
O	7	DEG

ABSOLUTE MAXIMUM RATINGS

- Collector-base voltage (open emitter)
- Collector-emitter voltage (open base)
- Collector current
- Total power dissipation up to $T_C = 25^\circ\text{C}$
- Junction temperature
- Collector-emitter saturation voltage
 $I_C = 2.5 \text{ A}; i_B = 0.25 \text{ A}$
- D.C. current gain
 $I_C = 2.5 \text{ A}; V_{CE} = 4 \text{ V}$

V_{CBO}	max.	60 V
V_{CEO}	max.	50 V
I_C	max.	7.0 A
P_{tot}	max.	40 W
T_j	max.	150 °C
V_{CEsat}	max.	1.0 V
h_{FE}	min.	30
	max.	150

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

Limiting values

- Collector-base voltage (open emitter)
- Collector-emitter voltage (open base)
- Collector-emitter voltage ($V_{BE} = 1.5\text{V}$)
- Collector-emitter voltage ($R_{BE} = 100\Omega$)
- Emitter-base voltage (open collector)

V_{CBO}	max.	60 V
V_{CEO}	max.	50 V
V_{CEX}	max.	60 V
V_{CER}	max.	60 V
V_{EBO}	max.	5.0 V

Collector current	I_C	max.	7.0 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
Junction temperature	T_j	max.	150 $^\circ\text{C}$
Storage temperature	T_{stg}		-65 to +150 $^\circ\text{C}$

THERMAL RESISTANCE

From junction to ambient	$R_{th\ j-a}$	=	70 $^\circ\text{C/W}$
From junction to case	$R_{th\ j-c}$	=	3.125 $^\circ\text{C/W}$

CHARACTERISTICS

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

Collector cutoff current

$I_B = 0; V_{CE} = 40\text{ V}$	I_{CEO}	max.	1.0 mA
$V_{BE} = 1.5\text{ V}; V_{CE} = 60\text{ V}$	I_{CEX}	max.	0.1 mA
$V_{BE} = 1.5\text{ V}; V_{CE} = 50\text{ V}; T_C = 150^\circ\text{C}$	I_{CEX}	max.	2.0 mA

Emitter cut-off current

$I_C = 0; V_{EB} = 5\text{ V}$	I_{EBO}	max.	1 mA
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Breakdown voltages

$I_C = 0.1\text{ A}; I_B = 0$	$V_{CEO(sus)}^*$	min.	50 V
$I_C = 1\text{ mA}; I_E = 0$	V_{CBO}	min.	60 V
$I_E = 1\text{ mA}; I_C = 0$	V_{EBO}	min.	5.0 V

Saturation voltages

$I_C = 2.5\text{ A}; I_B = 0.25\text{ A}$	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

$I_C = 2.5\text{ A}; V_{CE} = 4\text{ V}$	$V_{BE(on)}^*$	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

$I_C = 2.5\text{ A}; V_{CE} = 4\text{ V}$	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

$I_C = 0.5\text{ A}; V_{CE} = 4\text{ V}$	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_T	min.	4 MHz
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* Pulsed: pulse duration = 300 μs ; duty cycle = 1.5%