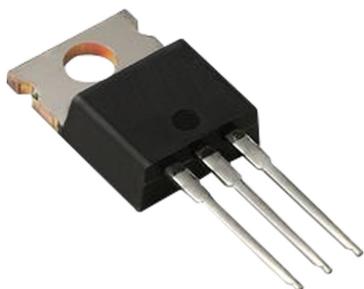
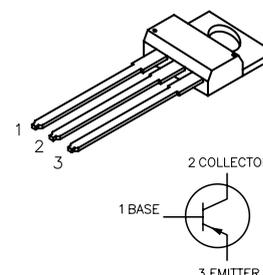


**RoHS  
Compliant**



### Description:

Plastic, NPN, TO-220 Power Transistor General purpose amplifier and switching applications.



### Features:

Collector Emitter Saturation Voltage  $I_C = 3A$ ,  $I_B = 0.6A$ ,  $V_{CE} = 1.2V$  (Max.)

D.C.Current Gain  $I_C = 1A$ ,  $V_{CE} = 4V$ ,  $h_{FE} = 25$  (Min.)

### Absolute Maximum Ratings:

Characteristic	Symbol	Rating
Collector - Base Voltage	$V_{CES}$	115V
Collector - Emitter Voltage	$V_{CEP}$	100V
Emitter - Base Voltage	$V_{EBO}$	5V
Continuous Collector Current	$I_C$	3A
Base Current	$I_B$	1A
Total Device Dissipation ( $T_C = +25^\circ C$ ), Derate above $25^\circ C$	$P_D$	40W 0.32mW/ $^\circ C$
Operating Junction Temperature Range	$T_J$	$-65^\circ C$ to $+150^\circ C$
Storage Temperature Range	$T_{STG}$	$-65^\circ C$ to $+150^\circ C$

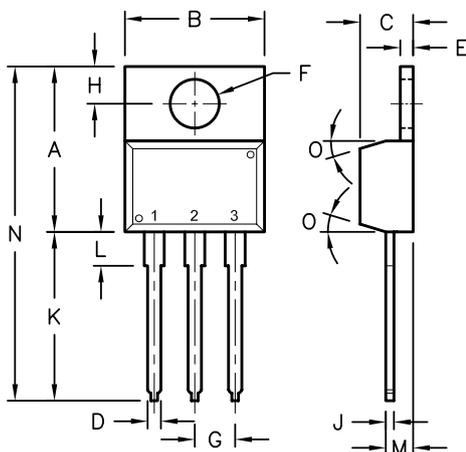
### Electrical Characteristics ( $T_A = 25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
<b>OFF Characteristics</b>					
Collector - Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 30mA$ , $I_B = 0$ , Note 1	100	-	V
Collector - Emitter Sustaining Voltage	$V_{(BR)CES}$	$I_C = 1mA$ , $V_{BE} = 0$	115	-	V
Emitter - Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1mA$ , $I_C = 0$	5	-	V
Collector Cutoff Current	$I_{CES}$	$V_{CE} = 100V$ , $V_{BE} = 0$	-	0.2	mA
	$I_{CEO}$	$V_{CB} = 60V$ , $I_B = 0$	-	0.3	mA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 5V$ , $I_C = 0$	-	1	mA

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
<b>ON Characteristics</b>					
DC Current Gain, Note 1	h <sub>FE</sub>	V <sub>CE</sub> = 4V, I <sub>C</sub> = 1A	25	-	-
		V <sub>CE</sub> = 4V, I <sub>C</sub> = 3A	10	-	-
Collector - Emitter Saturation Voltage, Note 1	V <sub>CE(sat)</sub>	I <sub>C</sub> = 3A, I <sub>B</sub> = 0.6A	-	1.2	V
Base - Emitter On Voltage, Note 1	V <sub>BE(on)</sub>	I <sub>C</sub> = 3A, V <sub>CE</sub> = 4V	-	1.8	V

<b>Small-Signal Characteristics</b>					
Current Gain - Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = 10V, I <sub>C</sub> = 0.5A, f = 1MHz	3	-	MHz
Output Capacitance	h <sub>FE</sub>	V <sub>CE</sub> = 10V, I <sub>C</sub> = 0.5A, f = 0.1kHz	20	-	-

Note 1 : Pulse test : Pulse width ≤ 300μs, duty cycle ≤ 2%



**Pin Configuration:**

1. Base
2. Collector
3. Emitter

Dim.	A	B	C	D	E	F	G	H	J	K	L	M	N	O
Min.	14.42	9.63	3.65	-	1.15	3.75	2.29	2.54	-	12.7	2.8	2.03	-	7°
Max.	16.51	10.67	4.83	0.9	1.4	3.88	2.79	3.43	0.56	14.73	4.07	2.92	31.24	

Dimensions : Millimetres

**Part Number Table**

Description	Part Number
Bipolar Transistor, NPN, 3A, 100V, TO-220	BD241C

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