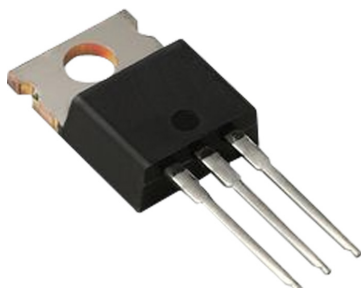
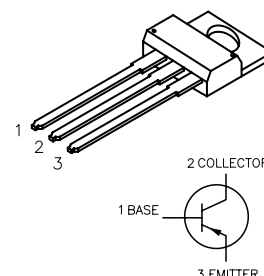


RoHS
Compliant



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
OFF Characteristics					
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
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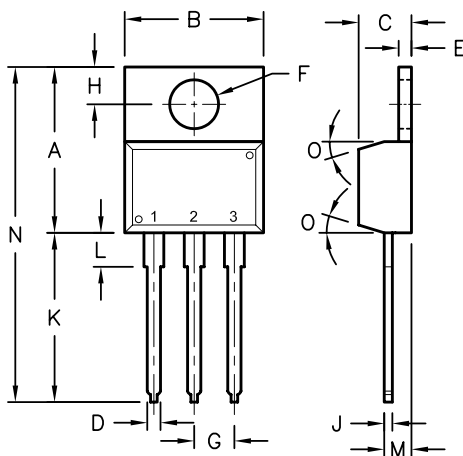
ON Characteristics

DC Current Gain, Note 1	h_{FE}	$V_{CE} = 4V, I_C = 1A$	25	-	-
		$V_{CE} = 4V, I_C = 3A$	10	-	-
Collector - Emitter Saturation Voltage, Note 1	$V_{CE(sat)}$	$I_C = 3A, I_B = 0.6A$	-	1.2	V
Base - Emitter On Voltage, Note 1	$V_{BE(on)}$	$I_C = 3A, V_{CE} = 4V$	-	1.8	V

Small-Signal Characteristics

Current Gain - Bandwidth Product	f_T	$V_{CE} = 10V, I_C = 0.5A, f = 1MHz$	3	-	MHz
Output Capacitance	h_{FE}	$V_{CE} = 10V, I_C = 0.5A, f = 0.1kHz$	20	-	-

Note 1 : Pulse test : Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$



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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