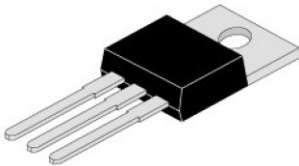


RoHS
Compliant



Applications

- Intended for a wide variety of Switching and Amplifier Applications
- Series and Shunt Regulators
- Driver and Output stages of Hi-Fi Amplifiers

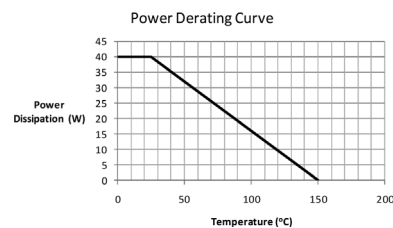
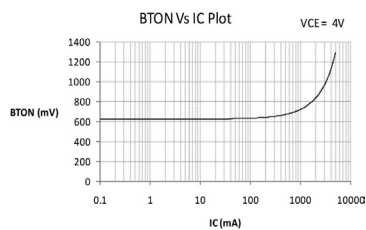
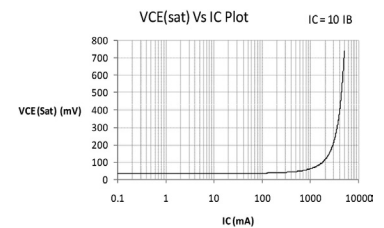
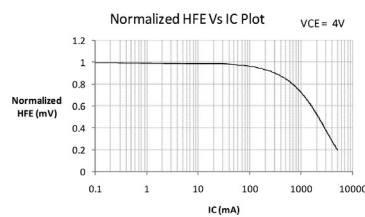
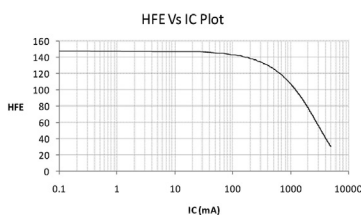
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Description	Symbol	BD241C	Unit
Collector Emitter Voltage	V_{CEO}	100	V
Collector Base Voltage	V_{CBO}	115	
Collector Emitter Voltage (RBE=100fi)	V_{CER}	115	
Emitter Base Voltage	V_{EBO}	5	
Collector Current Continuous	I_C	5	A
Collector Current Peak	I_{CM}	8	
Base Current	I_B	1	
Power Dissipation upto $T_C=25^\circ\text{C}$	P_D	40	W
Power Dissipation upto $T_a=25^\circ\text{C}$		2	
Derate above 25°C		16	mW/ $^\circ\text{C}$
Storage Temperature	T_{stg}	- 65 to +150	$^\circ\text{C}$
Junction Temperature	T_j	150	
Thermal Characteristics			
Junction to Case	$R_{th(j-c)}$	3.12	$^\circ\text{C}/\text{W}$
Junction to Ambient in free air	$R_{th(j-a)}$	62.5	

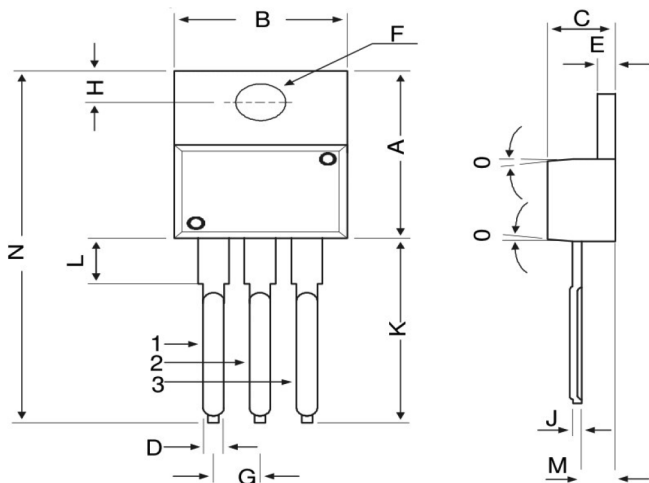
Electrical Characteristics

Parameter	Symbol	Test Condition	Min.	Max.	Unit
Collector Emitter (sus) Voltage	*V _{CEO(sus)}	I _C =30mA, I _B =0	100	--	V
Collector Cut Off Current	I _{CEO}	V _{CE} =60V I _B =0	--	0.3	mA
Collector Cut Off Current	I _{CES}	V _{CE} =V _{CEO(max)}	--	0.2	
Emitter Cut Off Current	I _{EBO}	V _{EB} =5V, I _C =0	--	1	
DC Current Gain	*h _{FE}	I _C =1A, V _{CE} =4V	25	--	--
		I _C =3A, V _{CE} =4V	10	--	--
Collector Emitter Saturation Voltage	*V _{CE(sat)}	I _C =3A, I _B =0.6A	--	1.2	V
Base Emitter On Voltage	*V _{BE(on)}	I _C =3A, V _{CE} =4V	--	1.8	
*Pulse Test : Pulse width <300ms, Duty Cycle <2%					
Dynamic Characteristic					
Small Signal Current Gain	h _{fe}	I _C =0.5A, V _{CE} =10V	20	--	--
Transition Frequency	f _T	I _C =0.5A, V _{CE} =10V	3		MHz
Turn Off Breakdown Energy	E _(BR)	L=20mH, I _{CC} =1.22A PNP	15		--
		L=20mH, I _{CC} =1.8A NPN	32		
Switching Characteristics					
Turn On Time	t _{on}	V _{CC} =20V, I _C =1A,	0.3		μS
Turn Off Time	t _{off}	I _{B1} =I _{B2} =0.1A	1		

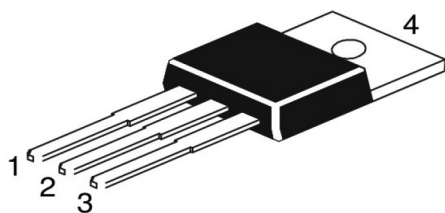
Typical Characteristics Curves



Diagram



DIM	MIN	MAX
A	14.2	16.51
B	9.63	10.67
C	3.56	4.83
D	--	0.9
E	1.15	1.4
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
J	--	0.56
K	12.7	14.73
L	2.8	4.07
M	2.03	2.92
N	--	31.24
O	7 DEG.	



Pin Configuration

1. Base
2. Collector
3. Emitter
4. Collector

Part Number Table

Description	Part Number
Signle Bipolar Transistor, NPN, 40V, 4A, 100V, TO-220	BD241C

Dimensions : Millimetres

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