

Silicon NPN Power Transistor

BD243/A/B/C

DESCRIPTION

- DC Current Gain $-h_{FE} = 30(\text{Min}) @ I_C = 0.3A$
- Collector-Emitter Sustaining Voltage-
: $V_{CEQ(\text{SUS})} = 45V(\text{Min})$ - BD243; $60V(\text{Min})$ - BD243A
80V(Min)- BD243B; $100V(\text{Min})$ - BD243C
- Complement to Type BD244/A/B/C.

APPLICATIONS

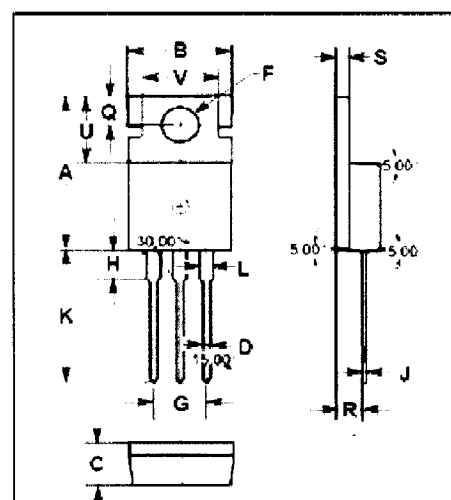
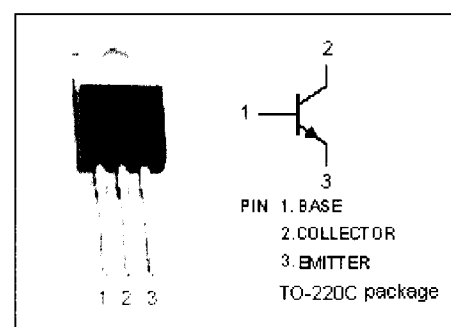
- Designed for use in general purpose power amplifier and switching applications

ABSOLUTE MAXIMUM RATINGS($T_a = 25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	BD243	45
		BD243A	60
		BD243B	80
		BD243C	100
V_{CEO}	Collector-Emitter Voltage	BD243	45
		BD243A	60
		BD243B	80
		BD243C	100
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	6.0	A
I_{CM}	Collector Current-Peak	10	A
I_B	Base Current	2.0	A
P_C	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	65	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.92	$^\circ\text{C/W}$



DIM	mm	
	MIN	MAX
A	15.70	15.90
B	9.90	10.10
C	4.20	4.40
D	0.70	0.90
F	3.40	3.60
G	4.98	5.18
H	2.70	2.90
J	0.44	0.46
K	13.20	13.40
L	1.10	1.30
Q	2.70	2.90
R	2.50	2.70
S	1.29	1.31
U	6.45	6.65
V	8.66	8.86



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	BD243	$I_C = 30\text{mA}; I_B = 0$	45		V
		BD243A		60		
		BD243B		80		
		BD243C		100		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage		$I_C = 6\text{A}; I_B = 1\text{A}$		1.5	V
$V_{BE(on)}$	Base-Emitter On Voltage		$I_C = 6\text{A}; V_{CE} = 4\text{V}$		2.0	V
I_{CES}	Collector Cutoff Current	BD243	$V_{CE} = 45\text{V}; V_{BE} = 0$		0.4	mA
		BD243A	$V_{CE} = 60\text{V}; V_{BE} = 0$			
		BD243B	$V_{CE} = 80\text{V}; V_{BE} = 0$			
		BD243C	$V_{CE} = 100\text{V}; V_{BE} = 0$			
I_{CEO}	Collector Cutoff Current	BD243/A	$V_{CE} = 30\text{V}; I_B = 0$		0.7	mA
		BD243B/C	$V_{CE} = 60\text{V}; I_B = 0$			
I_{EBO}	Emitter Cutoff Current		$V_{EB} = 5\text{V}; I_C = 0$		1.0	mA
h_{FE-1}	DC Current Gain		$I_C = 0.3\text{A}; V_{CE} = 4\text{V}$	30		
h_{FE-2}	DC Current Gain		$I_C = 3\text{A}; V_{CE} = 4\text{V}$	15		
f_T	Current-Gain—Bandwidth Product		$I_C = 0.5\text{A}; V_{CE} = 10\text{V}; f_{test} = 1.0\text{MHz}$	3.0		MHz