

isc Silicon NPN Power Transistor

BD243/A/B/C

DESCRIPTION

- DC Current Gain $-h_{FE} = 30(\text{Min}) @ I_C = 0.3\text{A}$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(\text{SUS})} = 45\text{V}(\text{Min})$ - BD243; $60\text{V}(\text{Min})$ - BD243A
 $80\text{V}(\text{Min})$ - BD243B; $100\text{V}(\text{Min})$ - BD243C
- Complement to Type BD244/A/B/C
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

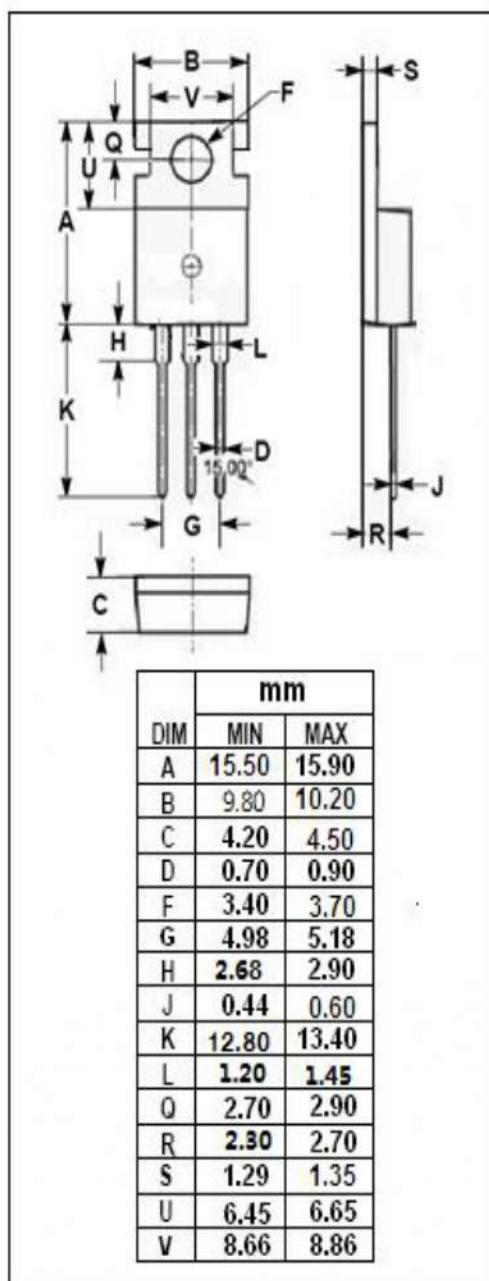
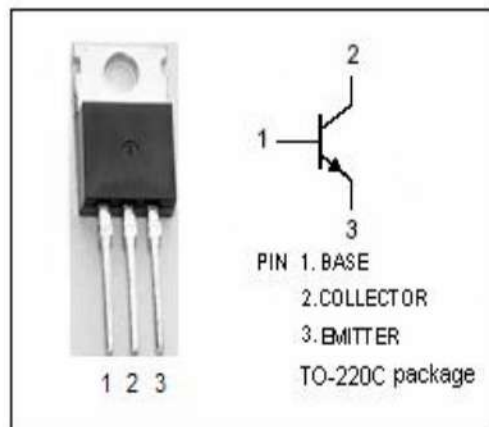
- Designed for use in general purpose power amplifier and switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	BD243 55	V
		BD243A 70	
		BD243B 90	
		BD243C 110	
V_{CEO}	Collector-Emitter Voltage	BD243 45	V
		BD243A 60	
		BD243B 80	
		BD243C 100	
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	6	A
I_{CM}	Collector Current-Peak	10	A
I_B	Base Current	3	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	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	BD243	I _C = 30mA ; I _B =0	45		V
		BD243A		60		
		BD243B		80		
		BD243C		100		
V _{CE(sat)}	Collector-Emitter Voltage	Saturation	I _C = 6A; I _B = 1A		1.5	V
V _{BE(on)}	Base-Emitter On Voltage		I _C = 6A ; V _{CE} = 4V		2.0	V
I _{CBO}	Collector Cutoff Current	BD243	V _{CB} = 55V; V _{BE} = 0		0.4	mA
		BD243A	V _{CB} = 70V; V _{BE} = 0			
		BD243B	V _{CB} = 90V; V _{BE} = 0			
		BD243C	V _{CB} = 110V; V _{BE} = 0			
I _{CEO}	Collector Cutoff Current	BD243/A	V _{CE} = 30V; I _B = 0		0.7	mA
		BD243B/C	V _{CE} = 60V; I _B = 0			
I _{EBO}	Emitter Cutoff Current		V _{EB} = 5V; I _C =0		1.0	mA
h _{FE-1}	DC Current Gain		I _C = 0.3A ; V _{CE} = 4V	30		
h _{FE-2}	DC Current Gain		I _C = 3A ; V _{CE} = 4V	15		
f _T	Current-Gain—Bandwidth Product		I _C = 0.5A ; V _{CE} = 10V, f _{test} = 1.0MHz	3.0		MHz

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