

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

APPLICATIONS

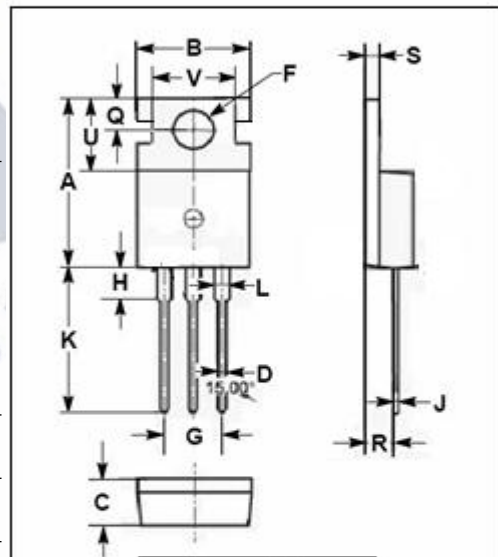
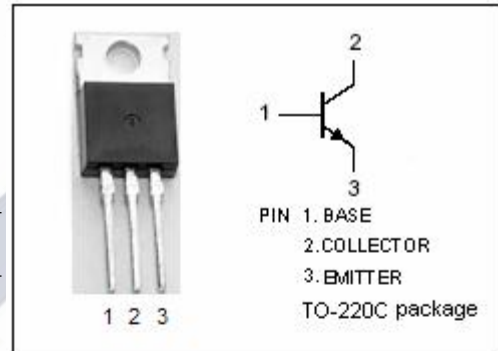
- Designed for use in general purpose power amplifier and switching applications

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	$^\circ\text{C/W}$



DIM	mm	
	MIN	MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

## isc Silicon NPN Power Transistor

## BD243/A/B/C

## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT	
$V_{CE(SUS)}$	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	
$I_{CBO}$	Collector Cutoff Current	BD243	$V_{CB}=55\text{V}; V_{BE}=0$	0.4	mA	
		BD243A				$V_{CB}=70\text{V}; V_{BE}=0$
		BD243B				$V_{CB}=90\text{V}; V_{BE}=0$
		BD243C				$V_{CB}=110\text{V}; V_{BE}=0$
$I_{CEO}$	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	