

isc Silicon NPN Power Transistor

BD743A

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 60V(\text{Min})$
- Collector Power Dissipation-
: $P_C = 90W @ I_C = 25^\circ C$
- 15A Continuous Collector Current
- Complement to Type BD744A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

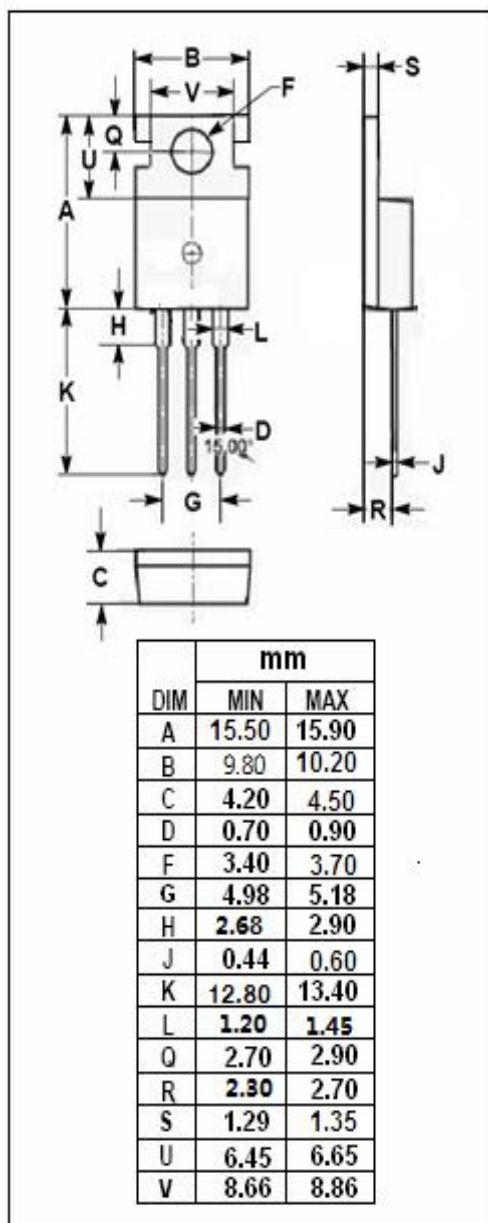
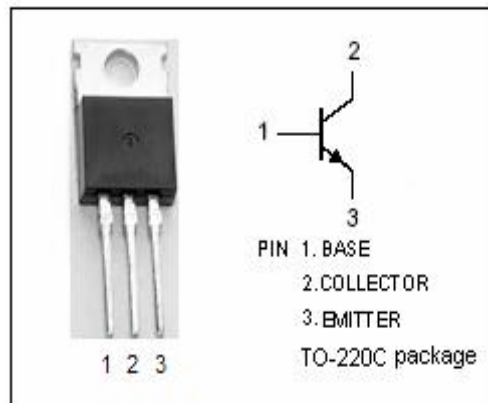
- Designed for use in general purpose power amplifier and switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	70	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	15	A
I_{CM}	Collector Current-Peak	20	A
I_B	Base Current-Continuous	5	A
P_C	Collector Power Dissipation @ $T_a = 25^\circ C$	2	W
	Collector Power Dissipation @ $T_C = 25^\circ C$	90	
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-65~150	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	1.4	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ C/W$



isc Silicon NPN Power Transistor**BD743A****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN		MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 30mA; I _B = 0	60			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 0.5A			1.0	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 15A; I _B = 5A			3.0	V
V _{BE(on)-1}	Base-Emitter On Voltage	I _C = 5A ; V _{CE} = 4V			1.0	V
V _{BE(on)-2}	Base-Emitter On Voltage	I _C = 15A ; V _{CE} = 4V			3.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 70V; I _E = 0			0.1	mA
		V _{CB} = 70V; I _E = 0; T _C = 125°C			5.0	
I _{CEO}	Collector Cutoff Current	V _{CE} = 30V; I _B = 0			0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			0.5	mA
h _{FE-1}	DC Current Gain	I _C = 1A ; V _{CE} = 4V	40			
h _{FE-2}	DC Current Gain	I _C = 5A ; V _{CE} = 4V	20		150	
h _{FE-3}	DC Current Gain	I _C = 15A ; V _{CE} = 4V	5			

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