

isc Silicon PNP Power Transistor

BD954

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = -100V(\text{Min})$
- DC Current Gain-
: $h_{FE} = 40(\text{Min}) @ I_C = -500mA$
- Complement to Type BD953
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

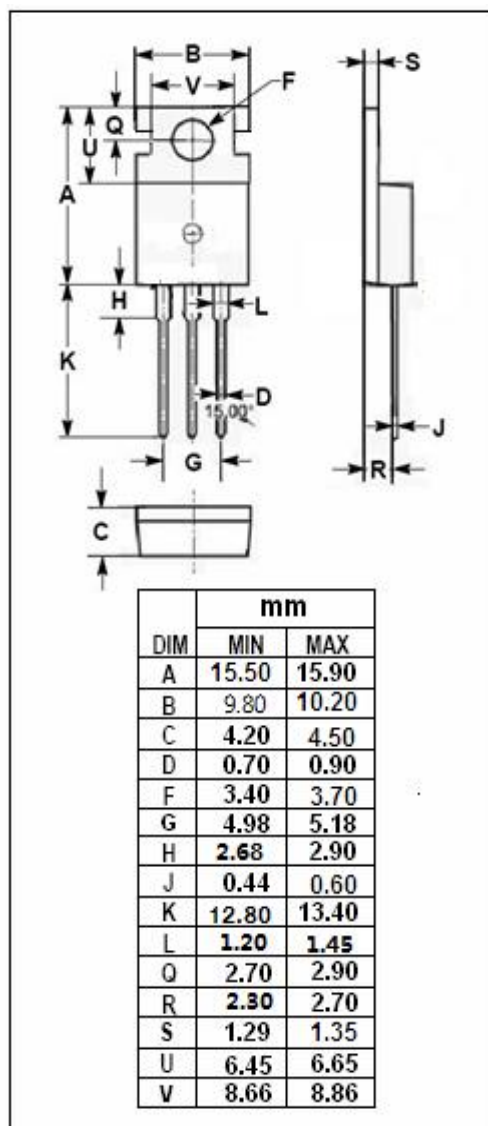
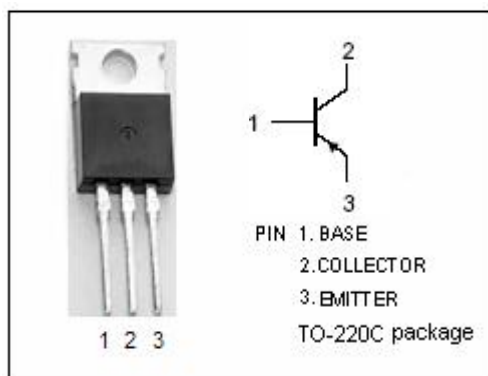
- Designed for power amplifier and switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-100	V
V_{CEO}	Collector-Emitter Voltage	-100	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-5	A
I_{CM}	Collector Current-Peak	-8	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	40	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	3.12	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	70	$^\circ\text{C/W}$



isc Silicon PNP Power Transistor**BD954****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = -1mA ; I _B = 0	-100			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = -1mA ; I _E = 0	-100			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = -1mA ; I _C = 0	-5			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = -2A; I _B = -0.2A			-1.0	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = -2A; V _{CE} = -4V			-1.4	V
I _{CBO}	Collector Cutoff Current	V _{CB} = -100V; I _E = 0			-50	μ A
		V _{CB} = -50V; I _E = 0, T _J =150°C			-1.0	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = -50V; I _B = 0			-0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = -5V; I _C = 0			-0.2	mA
h _{FE-1}	DC Current Gain	I _C = -500mA ; V _{CE} = -4V	40			
h _{FE-2}	DC Current Gain	I _C = -2A ; V _{CE} = -4V	20			
f _T	Current-Gain—Bandwidth Product	I _C = -500mA ; V _{CE} = -4V	3			MHz

Switching Times

t _{on}	Turn-On Time	I _C = -1.0A; I _{B1} = -I _{B2} = -0.1A; V _{CC} = -20V; R _L = 20 Ω		0.1		μ s
t _{off}	Turn-Off Time			0.4		μ s

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