

isc Silicon PNP Power Transistors

BD942

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = -120V(\text{Min})$
- Complement to Type BD941
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

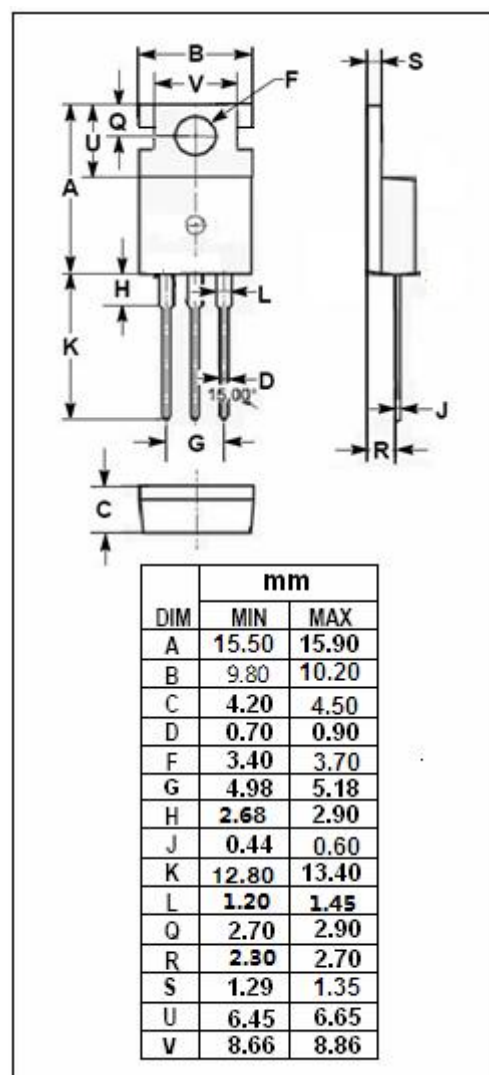
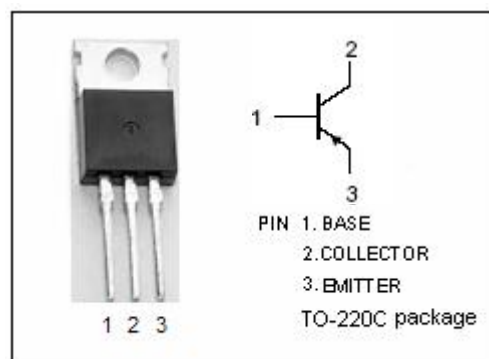
- Designed for use in output stages of audio and television amplifier circuits where high peak powers can occur.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-140	V
V_{CEO}	Collector-Emitter Voltage	-120	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-3	A
I_{CM}	Collector Current-Pulse	-7	A
I_B	Base Current-Continuous	-0.5	A
P_C	Collector Power Dissipation@ $T_c=25^\circ\text{C}$	30	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	4.17	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	70	$^\circ\text{C/W}$



isc Silicon PNP Power Transistors**BD942****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = -30mA; I _B = 0	-120		V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = -1A; I _B = -0.1A		-0.6	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = -1A ; V _{CE} = -2V		-1.3	V
I _{CBO}	Collector Cutoff Current	V _{CE} = -140V; V _{EB} = 0		-0.05	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = -120V; 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 = -150mA ; V _{CE} = -2V	40	250	
h _{FE-2}	DC Current Gain	I _C = -1A ; V _{CE} = -2V	25		
f _T	Current-Gain—Bandwidth Product	I _C = -0.25A ; V _{CE} = -10V	3		MHz

Switching Times

t _{on}	Turn-On Time	I _C = 1.0A; I _{B1} = -I _{B2} = 0.1A		1.0	μs
t _{off}	Turn-Off Time			3.0	μs

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