

isc Silicon PNP Power Transistor

BD190

DESCRIPTION

- DC Current Gain-
: $h_{FE} = 40(\text{Min}) @ I_C = -0.5\text{A}$
- Collector-Emitter Sustaining Voltage -
: $V_{CEO(\text{SUS})} = -60\text{V}(\text{Min})$
- Complement to type BD189
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

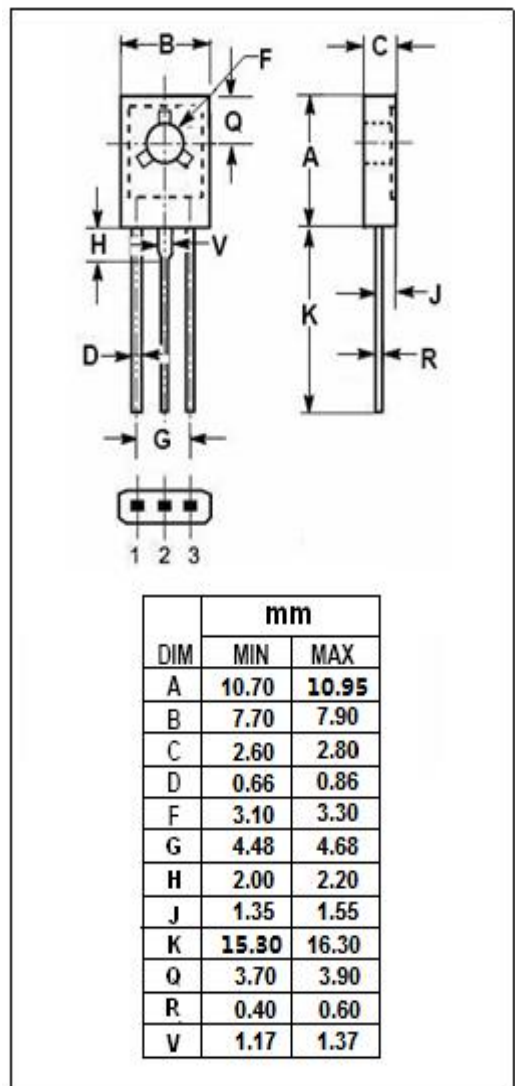
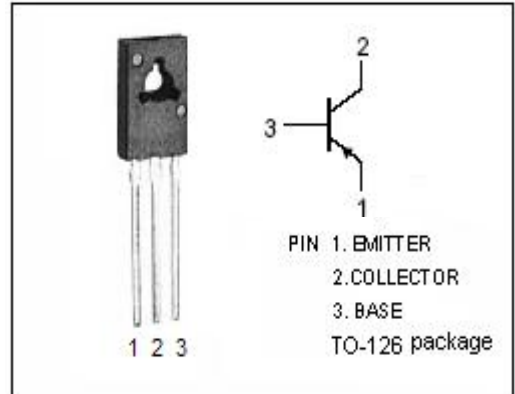
- Designed for use in 5 to 10 Watt audio amplifiers utilizing complementary or push-pull complementary circuits

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

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	-4	A
I_B	Base Current-Continuous	-2	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	$^\circ\text{C/W}$



isc Silicon PNP Power Transistor**BD190****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = -50mA ; I _B = 0	-60			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} = -2V			-1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = -70V; I _E = 0			-100	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = -5V; I _C = 0			-1	mA
I _{CBO}	Collector Cutoff Current	V _{CB} = -70V; I _E = 0			0.1	mA
h _{FE-1}	DC Current Gain	I _C = -0.5A; V _{CE} = -2V	40			
h _{FE-2}	DC Current Gain	I _C = -2A; V _{CE} = -2V	15			
f _T	Current-Gain—Bandwidth Product	I _C = -1A; V _{CE} = -10V	2			MHz

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