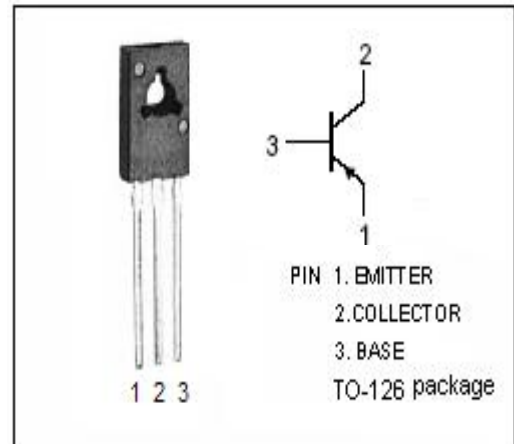


isc Silicon PNP Power Transistor
BD138
DESCRIPTION

- DC Current Gain-
: $h_{FE} = 40(\text{Min}) @ I_C = -0.15\text{A}$
- Collector-Emitter Sustaining Voltage -
: $V_{CEO(\text{SUS})} = -60\text{V}(\text{Min})$
- Complement to type BD137
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

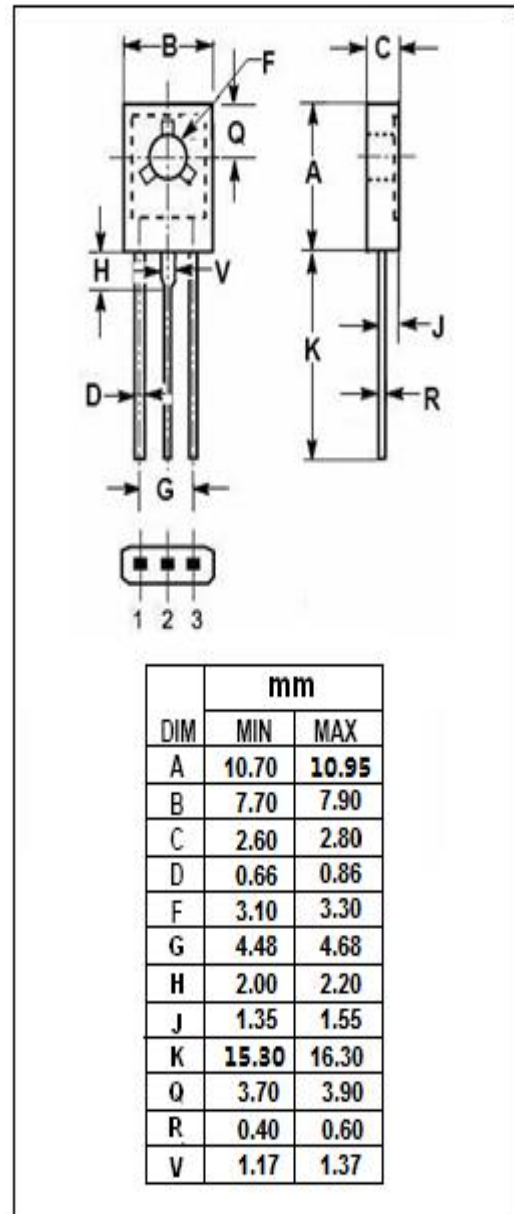
- Designed for use as audio amplifiers and drivers utilizing complementary or quasi complementary circuits.


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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-1.5	A
I_B	Base Current-Continuous	-0.5	A
P_C	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	1.25	W
	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	12.5	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	10	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	100	$^\circ\text{C/W}$



isc Silicon PNP Power Transistor

BD138

ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C = -30mA ; I _B =0	-60			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = -0.5A; I _B = -50mA			-0.5	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = -0.5A; V _{CE} = -2V			-1.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = -30V; I _E = 0 V _{CB} = -30V; I _E = 0, T _C =125°C			-0.1 -10	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = -5V; I _C =0			-10	μ A
h _{FE-1}	DC Current Gain	I _C = -5mA ; V _{CE} = -2V	25			
h _{FE-2}	DC Current Gain	I _C = -0.5A ; V _{CE} = -2V	25			
h _{FE-3}	DC Current Gain	I _C = -0.15A ; V _{CE} = -2V	40		250	

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