

isc Silicon PNP Darlington Power Transistor
2SB1005
DESCRIPTION

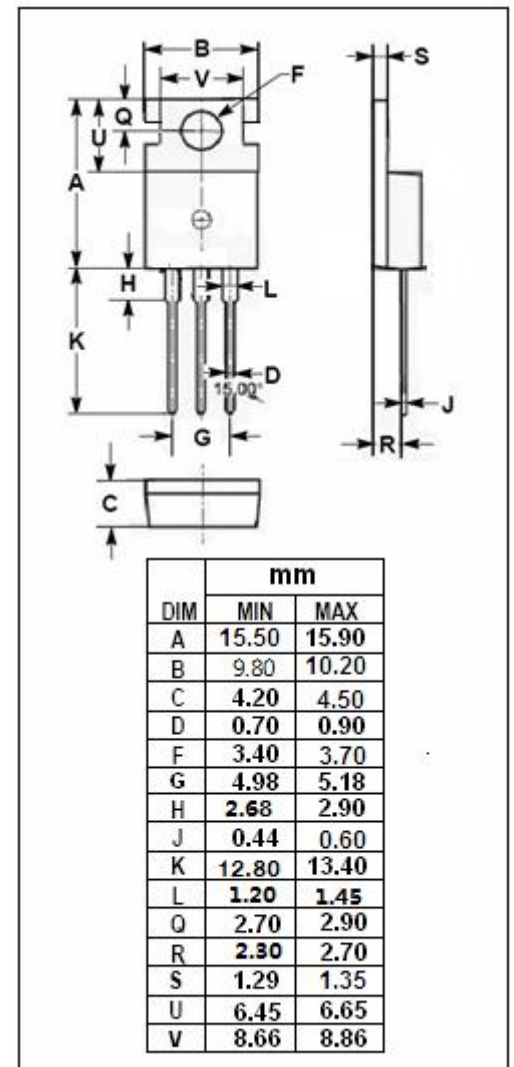
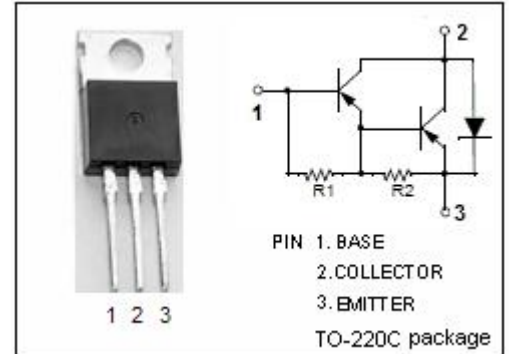
- High DC Current Gain-
: $h_{FE} = 750(\text{Min}) @ I_C = -1.5\text{A}$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(\text{SUS})} = -50\text{V}(\text{Min})$
- With TO-220C package
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for audio frequency power amplifier applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-4	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 Range	-55~150	$^\circ\text{C}$



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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 = -30mA, I _B = 0	-50			V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =-1mA, I _E =0	-50			V
V _{CE(sat)-1}	Collector-Emitter Saturation voltage	I _C = -1.5A, I _B = -30mA			-2.5	V
V _{CE(sat)-2}	Collector-Emitter Saturation voltage	I _C = -4A, I _B = -40mA			-4.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = -50V, I _E = 0			-0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = -5V; I _C = 0			-2	mA
h _{FE-1}	DC Current Gain	I _C = -1.5A ; V _{CE} = -3V	750			
h _{FE-2}	DC Current Gain	I _C = -4A ; V _{CE} = -3V	100			
V _F	Diode forward voltage	I _F =-4A			3.5	V

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