

Silicon PNP Darlington Power Transistor

2SB1031

DESCRIPTION

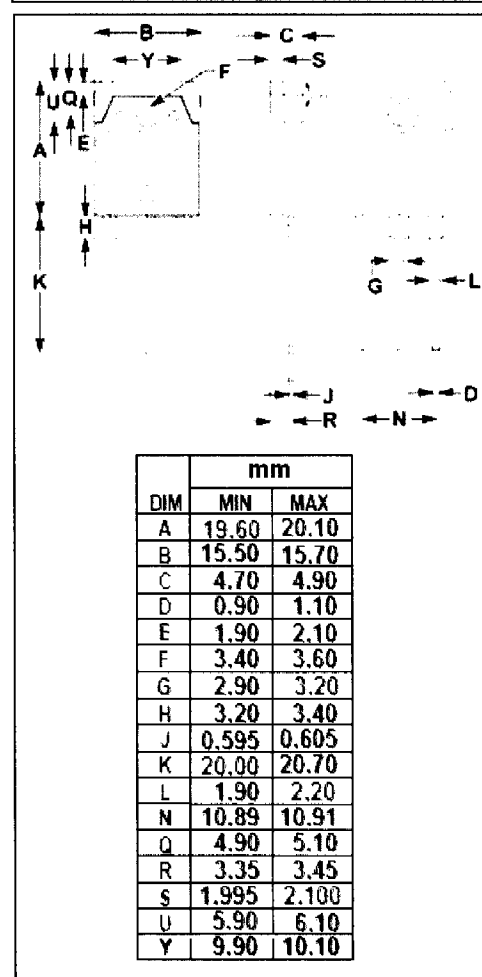
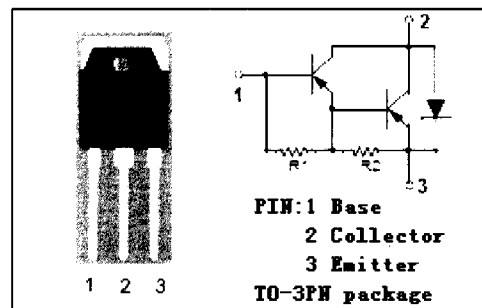
- High DC Current Gain-
: $h_{FE} = 1000(\text{Min}) @ I_C = -8\text{A}$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(\text{SUS})} = -100\text{V}(\text{Min})$
- Complement to Type 2SD1435

APPLICATIONS

- Designed for low frequency power amplifier 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	-7	V
I_C	Collector Current-Continuous	-15	A
I_{CM}	Collector Current-Peak	-20	A
I_B	Base Current- Continuous	-3	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	100	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

$T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = -30\text{mA}$, $R_{BE} = \infty$	-100			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -1\text{mA}$, $R_{BE} = \infty$	-100			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = -5\text{mA}$, $I_C = 0$	-7			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C = -8\text{A}$, $I_B = -16\text{mA}$			-2.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C = -15\text{A}$, $I_B = -150\text{mA}$			-3.0	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	$I_C = -8\text{A}$, $I_B = -16\text{mA}$			-2.5	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	$I_C = -15\text{A}$, $I_B = -150\text{mA}$			-3.5	V
I_{CBO}	Collector Cutoff current	$V_{CB} = -100\text{V}$, $I_E = 0$			-0.1	mA
I_{CEO}	Collector Cutoff current	$V_{CE} = -80\text{V}$, $R_{BE} = \infty$			-1.0	mA
h_{FE}	DC Current Gain	$I_C = -8\text{A}$; $V_{CE} = -3\text{V}$	1000		20000	

Switching Times

t_{on}	Turn-on Time	$I_C = -8\text{A}$, $I_{B1} = -I_{B2} = -16\text{mA}$;		2		μs
t_{stg}	Storage Time			8		μs