

isc Silicon NPN Darlington Power Transistor
2SD1044
DESCRIPTION

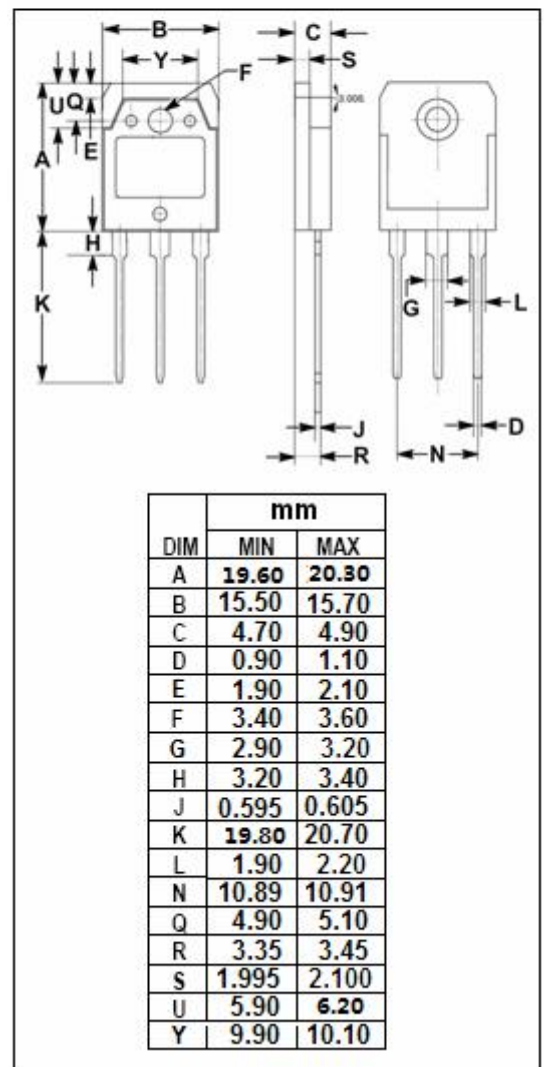
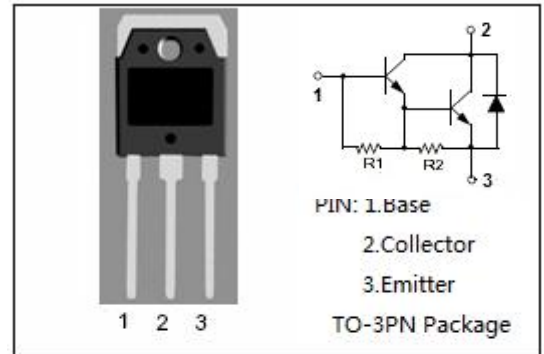
- High DC Current Gain
: $h_{FE} = 700(\text{Min.}) @ I_C = 1A, V_{CE} = 4V$
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 80V(\text{Min})$
- Wide Area of Safe Operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for high power amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CER}	Collector-Emitter Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	6	A
I_B	Base Current- Continuous	3	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	60	W
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Darlington Power Transistor**2SD1044****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V_{CER}	Collector-Emitter Breakdown Voltage	$I_C=50\text{mA}$, $R_{\text{BE}}=1\text{k}\Omega$	100			V
$V_{(\text{BR})\text{CEO}}$	Collector-Emitter Breakdown Voltage	$I_C=30\text{mA}$, $I_B=0$	80			V
$V_{\text{CE(sat)}}$	Collector-Emitter Saturation Voltage	$I_C=3\text{A}$, $I_B=30\text{mA}$			1.7	V
I_{CBO}	Collector Cutoff current	$V_{\text{CB}}=100\text{V}$, $I_E=0$			10	μA
I_{EBO}	Emitter Cutoff Current	$V_{\text{EB}}=6\text{V}$; $I_C=0$			10	mA
h_{FE}	DC Current Gain	$I_C=1\text{A}$; $V_{\text{CE}}=4\text{V}$	700		10000	

◆ **h_{FE} classifications**

Q	P	O
700-2500	2000-5000	4000-10000

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