

isc Silicon NPN Darlington Power Transistor
2SD1298
DESCRIPTION

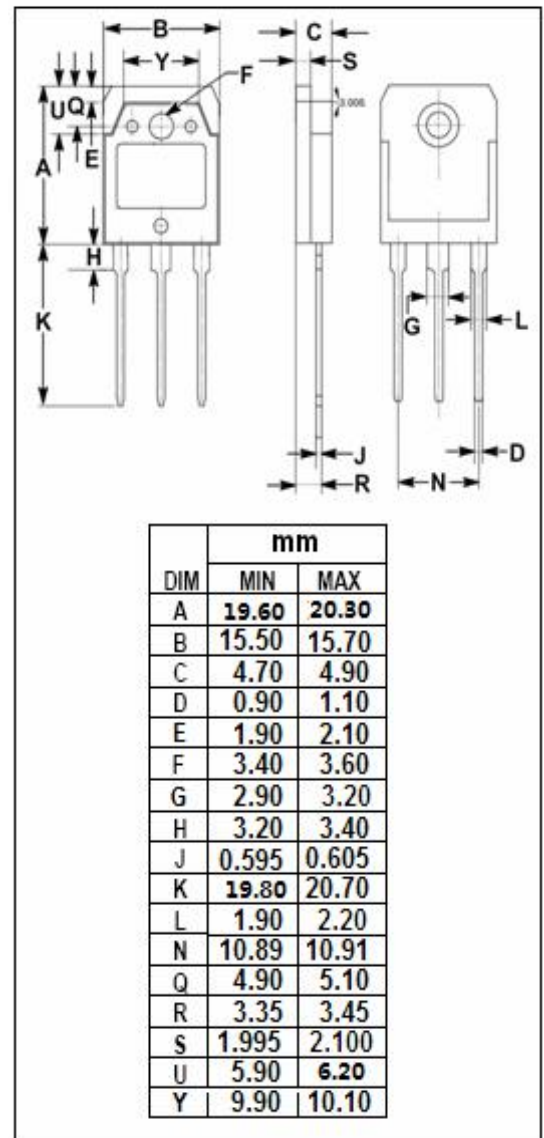
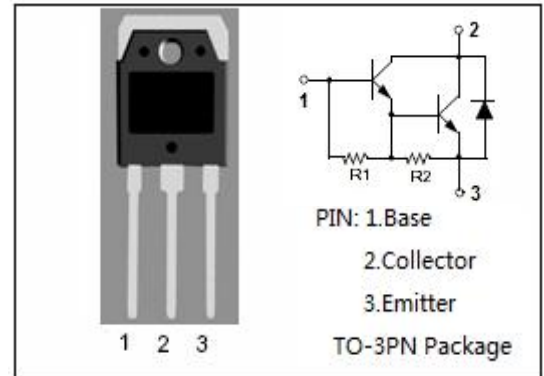
- High DC Current Gain
: $h_{FE} = 200(\text{Min.}) @ I_C = 6A, V_{CE} = 2V$
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 400V(\text{Min})$
- Low Collector Saturation Voltage
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for audio frequency power amplifier and low speed high current switching industrial applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	500	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Peak	20	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	100	W
	Collector Power Dissipation @ $T_a = 25^\circ\text{C}$	3.0	
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Darlington Power Transistor**2SD1298****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=10\text{mA}, I_B=0$	400			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=6\text{A}, I_B=60\text{mA}$			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=6\text{A}, I_B=60\text{mA}$			2.2	V
I_{CBO}	Collector Cutoff current	$V_{CB}=400\text{V}, I_E=0$			0.1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=8\text{V}, I_C=0$			100	mA
h_{FE}	DC Current Gain	$I_C=6\text{A}; V_{CE}=2\text{V}$	200		5000	

Switching Times

t_{on}	Turn-On Time	$I_C=6\text{A}, I_{B1}=I_{B2}=60\text{mA}$		1.5		μs
t_{stg}	Storage Time			7.0		μs
t_f	Fall Time			4.0		μs

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