

**isc Silicon NPN Darlington Power Transistor**
**2SD1294**
**DESCRIPTION**

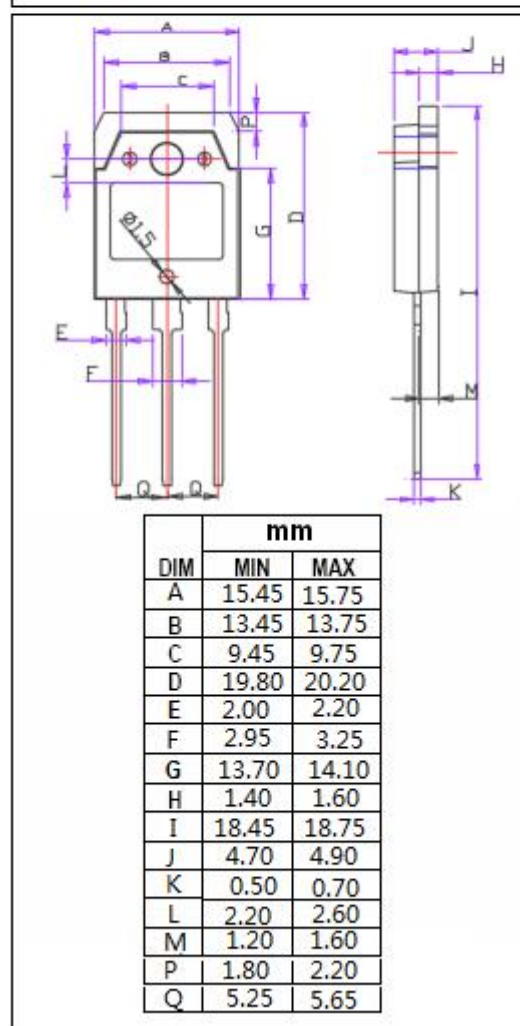
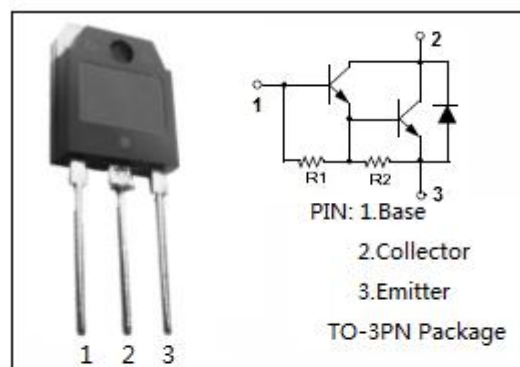
- Included Avalanche Diode-  
:  $V_Z = 60 \pm 15V$
- High DC Current Gain  
:  $h_{FE} = 2000 \sim 20000 @ I_C = 0.5A, V_{CE} = 5V$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Power regulator for line operated TV applications.

**ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ C$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	$60 \pm 15$	V
$V_{CEO}$	Collector-Emitter Voltage	$60 \pm 15$	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current-Continuous	5	A
$I_{CM}$	Collector Current-Pulse	20	A
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ C$	80	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ C$



**isc Silicon NPN Darlington Power Transistor****2SD1294****ELECTRICAL CHARACTERISTICS****T<sub>c</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage	I <sub>C</sub> = 1mA; I <sub>E</sub> = 0	45		75	V
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 30mA; I <sub>B</sub> = 0	45		75	V
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 0.5A; I <sub>B</sub> = 1mA			1.5	V
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 1A; I <sub>B</sub> = 1mA			2.5	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage	I <sub>C</sub> = 0.5A; V <sub>CE</sub> = 5V			1.8	V
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 6V; I <sub>C</sub> = 0			100	μ A
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 0.5A; V <sub>CE</sub> = 5V	2000		20000	

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