

**isc Silicon NPN Power Transistor**
**2SD1453**
**DESCRIPTION**

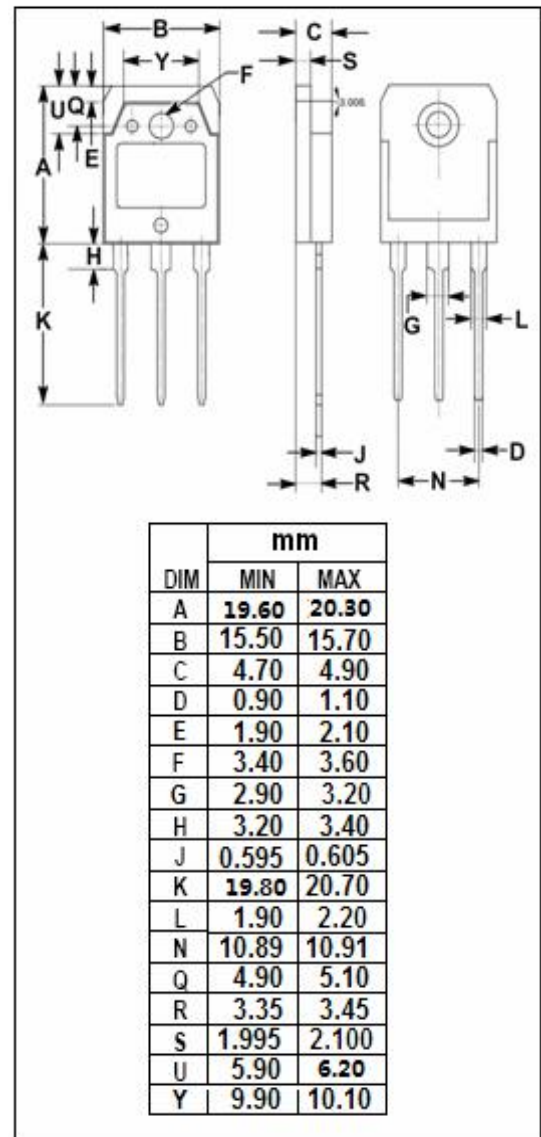
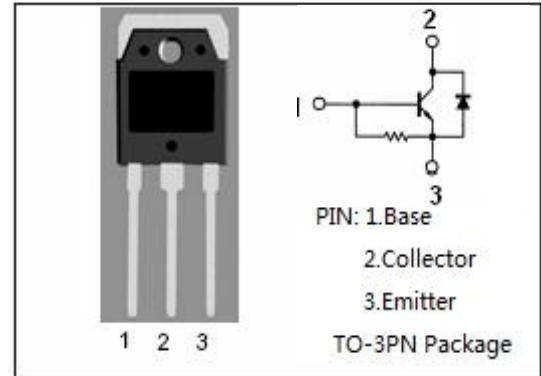
- High Breakdown Voltage-  
:  $V_{CBO} = 1500V$  (Min)
- High Switching Speed
- Built-in Damper Diode
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for TV horizontal deflection output applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CES}$	Collector-Emitter Voltage	1500	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current-Continuous	3	A
$I_{CM}$	Collector Current-Peak	3.5	A
$I_{C(surge)}$	Collector Current-Surge	10	A
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ C$	50	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-45~150	$^\circ C$



## isc Silicon NPN Power Transistor

2SD1453

## ELECTRICAL CHARACTERISTICS

T<sub>c</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 200mA; I <sub>C</sub> = 0	6			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 2.5A; I <sub>B</sub> = 0.8A			5.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 2.5A; I <sub>B</sub> = 0.8A			1.5	V
I <sub>CES</sub>	Collector Cutoff Current	V <sub>CE</sub> = 1500V; R <sub>BE</sub> = ∞			0.5	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 0.3A; V <sub>CE</sub> = 5V	8			
V <sub>ECF</sub>	C-E Diode Forward Voltage	I <sub>F</sub> = 3A			2.2	V
t <sub>f</sub>	Fall Time	I <sub>CP</sub> = 2.75A, I <sub>B1</sub> = 0.6A, I <sub>B2</sub> = -1.3A			0.8	μs

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