

isc Silicon NPN Power Transistor

2SD1503

DESCRIPTION

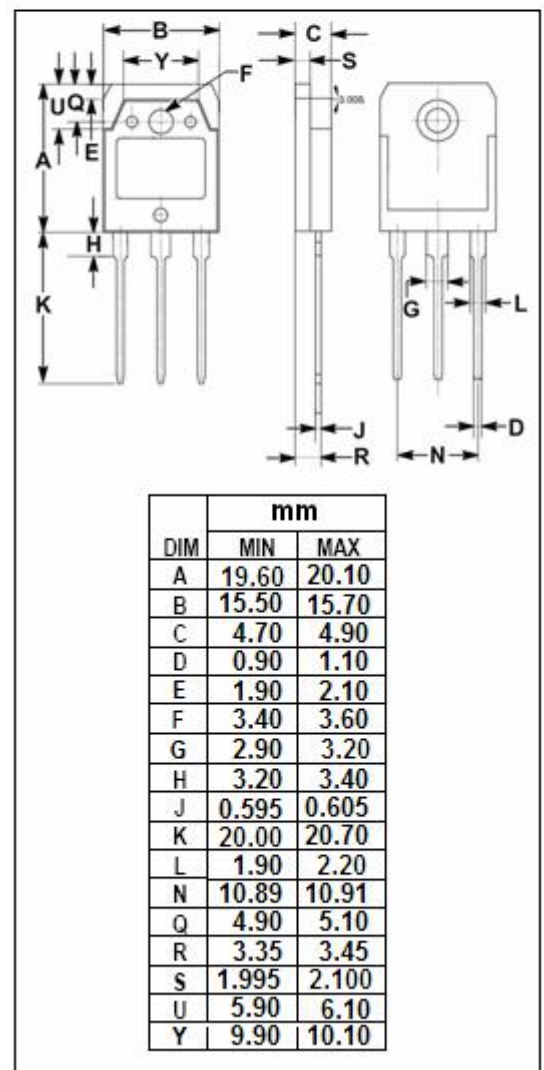
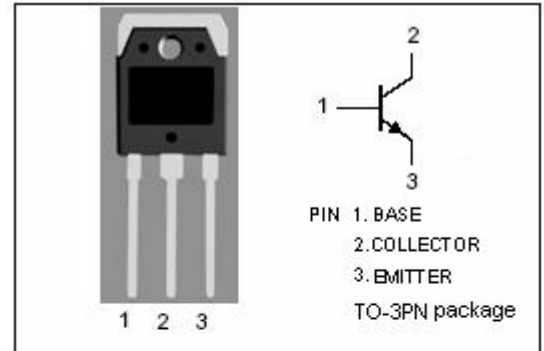
- High Collector-Base Voltage -
: $V_{CBO} = 900V(\text{Min})$
- High Switching Speed
- Wide Area of Safe Operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for power amplifier and power switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	900	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	6	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	50	W
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$



isc Silicon NPN Power Transistor**2SD1503****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 30mA ; I _B = 0	400			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 4A; I _B = 0.8A			2.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 4A; I _B = 0.8A			1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 900V; I _E = 0			100	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5.0V ; I _C = 0			100	μ A
h _{FE-1}	DC Current Gain	I _C = 1A ; V _{CE} = 5V	8		30	
h _{FE-2}	DC Current Gain	I _C = 4A ; V _{CE} = 5V	5			
f _T	Current-Gain—Bandwidth Product	I _C =0.5A;V _{CE} =10V;f _{test} =1.0MHz		7		MHz

Switching Times

t _{stg}	Storage Time	I _C = 4A, I _{B1} = 0.8A; I _{B2} = -1.6A			3.0	μ s
t _f	Fall Time				0.5	μ s

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