

isc Silicon NPN Power Transistor

2SD1663

DESCRIPTION

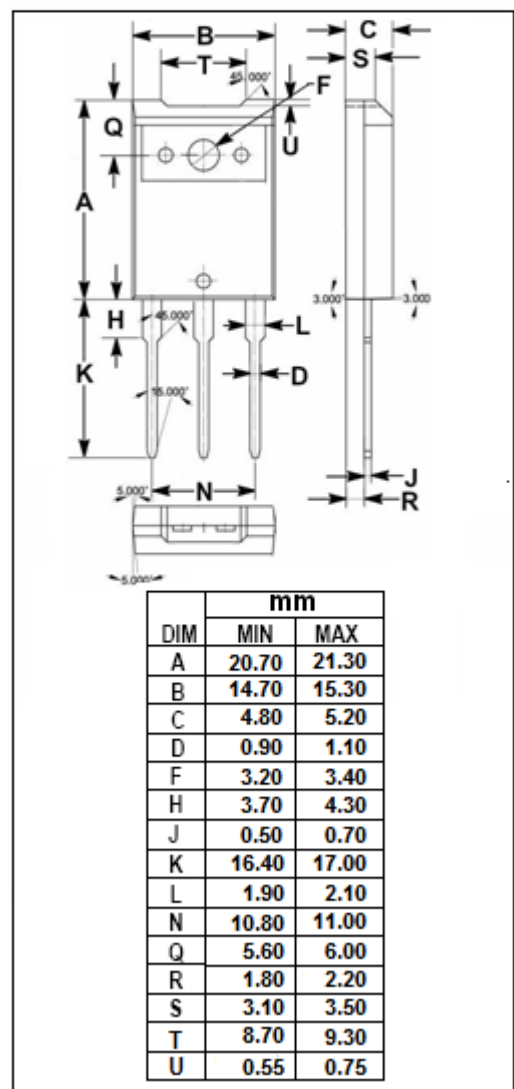
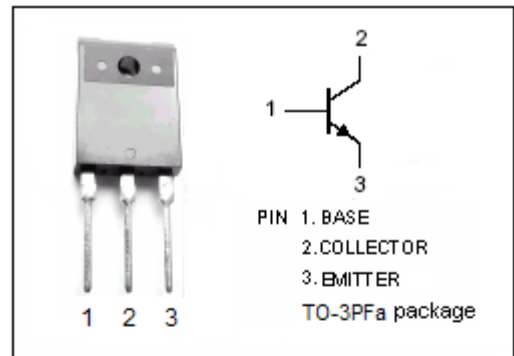
- High Collector-Base Breakdown Voltage-
: $V_{(BR)CBO} = 1500V$ (Min.)
- High Switching Speed
- Wide Area of Safe Operation

APPLICATIONS

- Designed for power switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1500	V
V_{CES}	Collector- Emitter Voltage	1500	V
V_{CEO}	Collector-Emitter Voltage	700	V
V_{EBO}	Emitter-Base Voltage	7.7	V
I_C	Collector Current-Continuous	5	A
I_B	Base Current-Continuous	3	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 Power Transistor**2SD1663****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=0.5\text{A}; L=50\text{mH}$	700			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=4.5\text{A}; I_B=2\text{A}$			2.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=4.5\text{A}; I_B=2\text{A}$			1.5	V
I_{EBO}	Emitter Cutoff Current	$V_{EB}=7.7\text{V}; I_C=0$			100	μA
I_{CBO}	Collector Cutoff Current	$V_{CB}=750\text{V}; I_E=0$ $V_{CB}=1500\text{V}; I_E=0$			50 1.0	μA mA
h_{FE}	DC Current Gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	18		50	

Switching times

t_{on}	Turn-On Time	$I_C=2.5\text{A}, I_{B1}=0.5\text{A}, I_{B2}=-1\text{A}$			1.0	μs
t_{stg}	Storage Time				3.0	μs
t_f	Fall Time				0.5	μs

◆ **h_{FE} Classifications**

Q	P
18-34	18-50