

isc Silicon NPN Power Transistor

2SD1713

DESCRIPTION

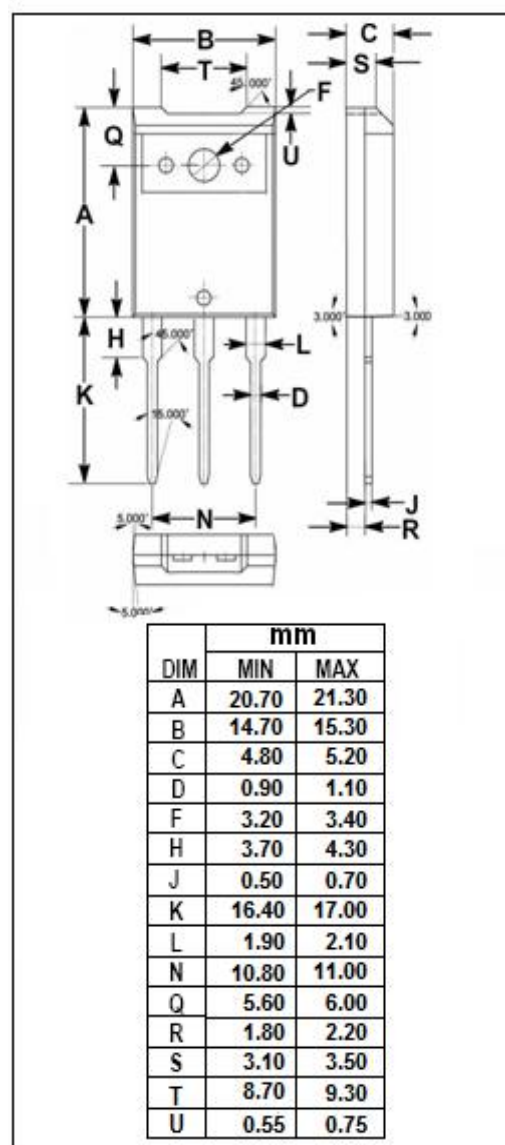
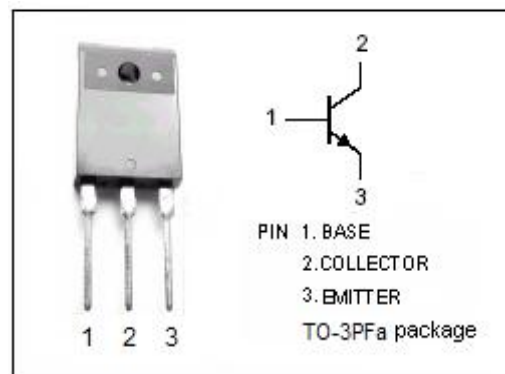
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 120V(\text{Min})$
- Good Linearity of h_{FE}
- Wide Area of Safe Operation
- Complement to Type 2SB1158
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for high power amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	120	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	6	A
I_{CP}	Collector Current-Pulse	10	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	70	W
	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	3	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Power Transistor**2SD1713****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=4\text{A}; I_B=0.4\text{A}$			2.0	V
$V_{BE(on)}$	Base -Emitter On Voltage	$I_C=4\text{A}; V_{CE}=5\text{V}$			1.8	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=120\text{V}; I_E=0$			50	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=3\text{V}; I_C=0$			50	μA
h_{FE-1}	DC Current Gain	$I_C=20\text{mA}; V_{CE}=5\text{V}$	20			
h_{FE-2}	DC Current Gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	60		200	
h_{FE-3}	DC Current Gain	$I_C=4\text{A}; V_{CE}=5\text{V}$	20			
C_{OB}	Collector Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f=1\text{MHz}$		85		pF
f_T	Current-Gain—Bandwidth Product	$I_C=0.5\text{A}; V_{CE}=5\text{V}$		20		MHz

◆ h_{FE-2} Classifications

Q	S	P
60-120	80-160	100-200

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