

**isc Silicon NPN Power Transistor**

**2SD1913**

**DESCRIPTION**

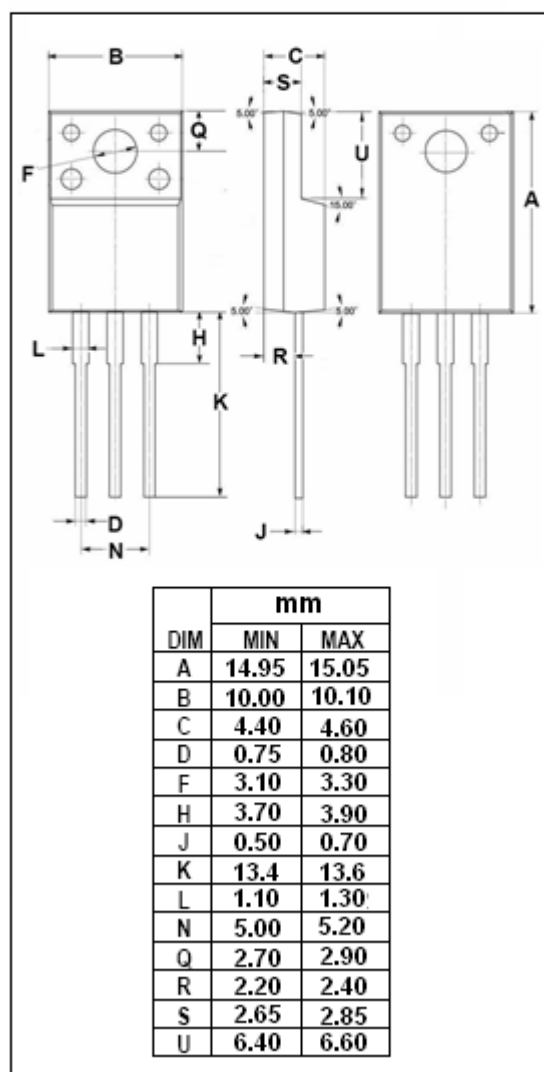
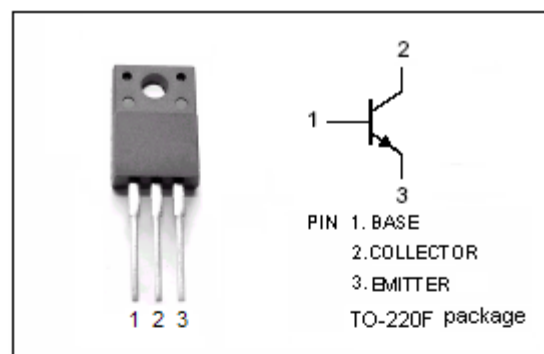
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 60V(\text{Min})$
- Wide Area of Safe Operation
- Complement to Type 2SB1274

**APPLICATIONS**

- Designed for general power amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	60	V
$V_{CEO}$	Collector-Emitter Voltage	60	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current-Continuous	3	A
$I_{CM}$	Collector Current-Peak	8	A
$P_C$	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	2	W
	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	20	
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^\circ\text{C}$



**isc Silicon NPN Power Transistor****2SD1913****ELECTRICAL CHARACTERISTICS**T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 5mA ; R <sub>BE</sub> = ∞	60			V
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage	I <sub>C</sub> = 1mA ; I <sub>E</sub> = 0	60			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 1mA ; I <sub>C</sub> = 0	6			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 2A; I <sub>B</sub> = 0.2A			1.0	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage	I <sub>C</sub> = 0.5A ; V <sub>CE</sub> = 5V			1.0	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 40V ; I <sub>E</sub> = 0			100	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 4V; I <sub>C</sub> = 0			100	μ A
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 0.5A ; V <sub>CE</sub> = 5V	70		280	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 3A ; V <sub>CE</sub> = 5V	20			
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = 10V, f= 1MHz		40		pF
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 0.5A ; V <sub>CE</sub> = 5V		100		MHz

◆ **h<sub>FE-1</sub> Classifications**

Q	R	S
70-140	100-200	140-280