

**isc Silicon PNP Power Transistor**

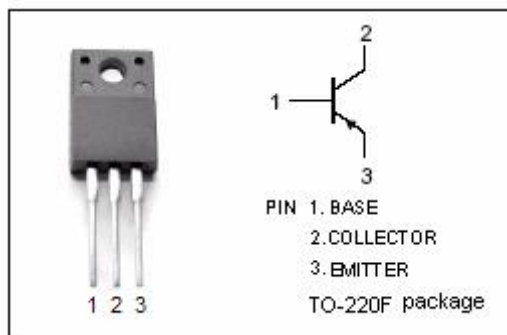
**2SB1186A**

**DESCRIPTION**

- High Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = -160V(\text{Min.})$
- Good Linearity of  $h_{FE}$
- Complement to Type 2SD1763A
- Good Linearity of  $h_{FE}$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

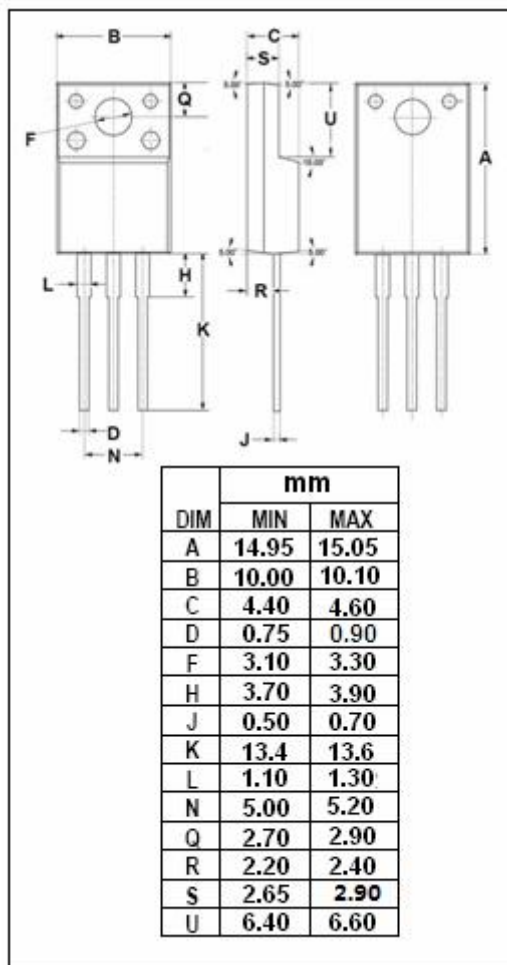
**APPLICATIONS**

- Power amplifier applications.
- Driver stage amplifier applications.



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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-160	V
$V_{CEO}$	Collector-Emitter Voltage	-160	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-1.5	A
$I_{CM}$	Collector Current-Peak	-3	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 Range	-55~150	$^\circ\text{C}$



**isc Silicon PNP Power Transistor****2SB1186A****ELECTRICAL CHARACTERISTICS****T<sub>c</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> = -1mA; I <sub>B</sub> = 0	-160			V
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage	I <sub>C</sub> = -50 μ A; I <sub>E</sub> = 0	-160			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = -50 μ A; I <sub>C</sub> = 0	-5			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -1A; I <sub>B</sub> = -0.1A			-2.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = -1A; I <sub>B</sub> = -0.1A			-1.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = -120V; I <sub>E</sub> = 0			-1	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = -4V; I <sub>C</sub> = 0			-1	μ A
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = -0.1A; V <sub>CE</sub> = -5V	60		200	
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = -10V; f <sub>test</sub> =1MHz		30		pF
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>E</sub> = 0.1A; V <sub>CE</sub> = -5V; f <sub>test</sub> = 30MHz		50		MHz

**◆ h<sub>FE</sub> Classifications**

D	E
60-120	100-200