

isc Silicon PNP Power Transistor

2SB778

DESCRIPTION

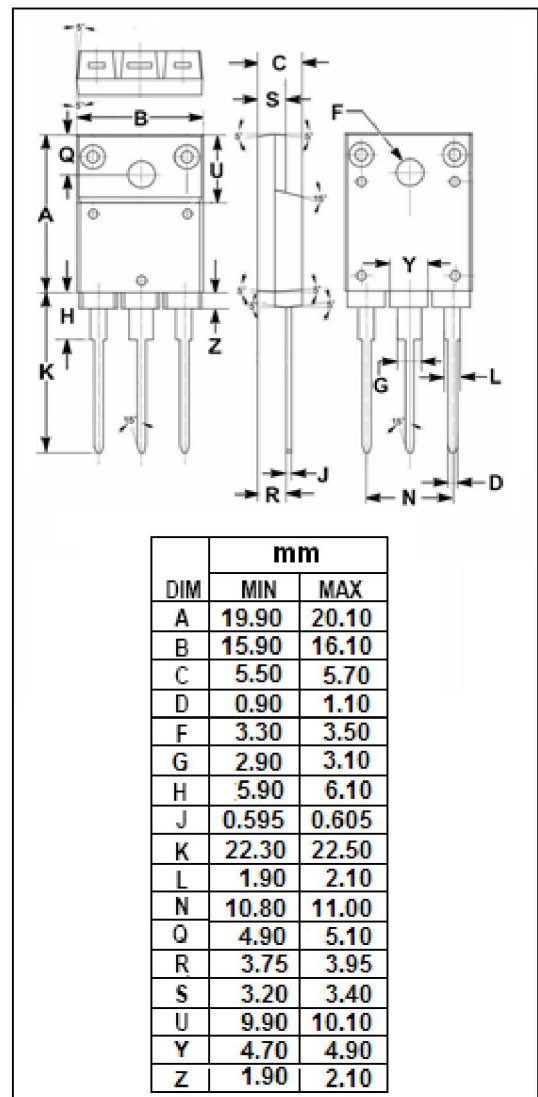
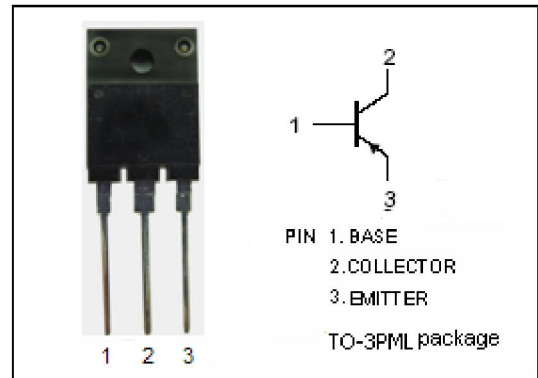
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = -120V(\text{Min})$
- Good Linearity of h_{FE}
- Complement to Type 2SD998

APPLICATIONS

- High power amplifier applications
- Recommend for 45-50W audio frequency amplifier output stage 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	-10	A
I_B	Base Current-Continuous	-1	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	80	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon PNP Power Transistor**2SB778****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -50\text{mA}$; $I_B = 0$	-120			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -5.0\text{A}$; $I_B = -0.5\text{A}$			-2.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -5\text{A}$; $V_{CE} = -5\text{V}$			-1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -120\text{V}$; $I_E = 0$			-10	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -5\text{V}$; $I_C = 0$			-10	μA
h_{FE}	DC Current Gain	$I_C = -1\text{A}$; $V_{CE} = -5\text{V}$	55		160	
C_{OB}	Output Capacitance	$I_E = 0$; $V_{CB} = -10\text{V}$; $f_{\text{test}} = 1.0\text{MHz}$		280		pF
f_T	Current-Gain—Bandwidth Product	$I_C = -1\text{A}$; $V_{CE} = -5\text{V}$		10		MHz

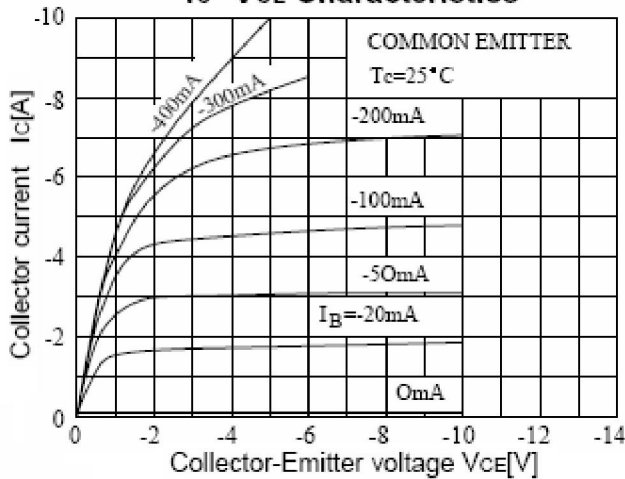
◆ **h_{FE} Classifications**

R	O
55-110	80-160

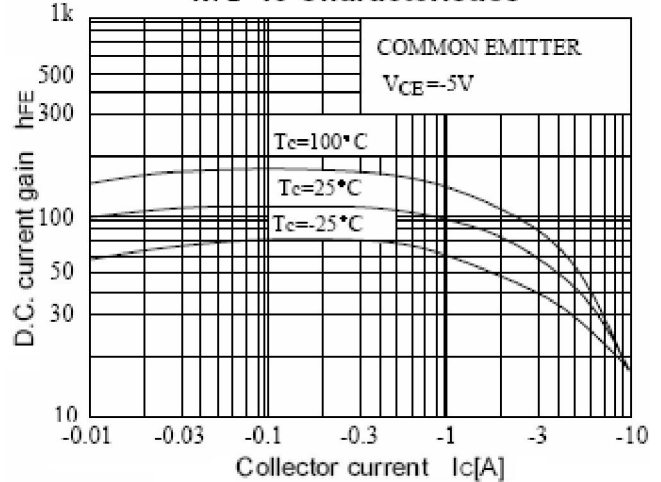
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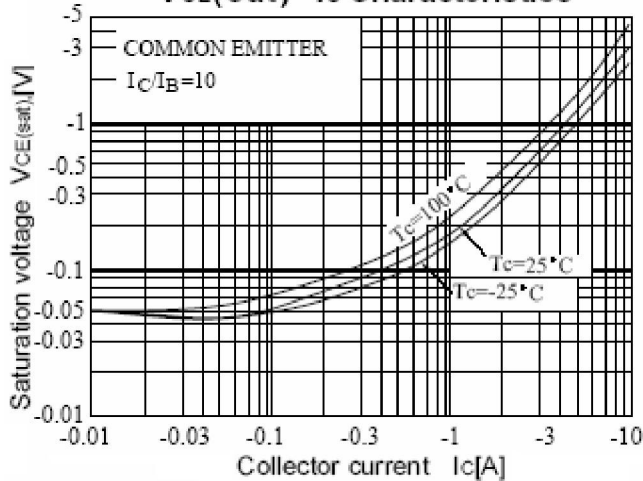
I_c-V_{CE} Characteristics



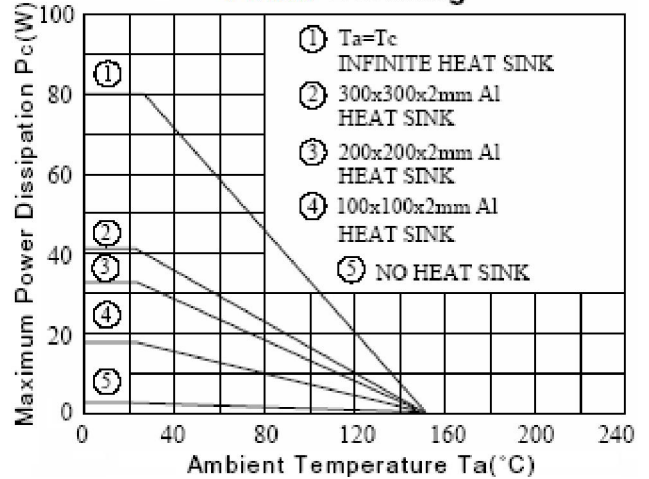
h_{FE}-I_c Characteristics



V_{CE(sat)}-I_c Characteristics



Power Derating



Safe Operating Area

