

isc Silicon PNP Power Transistor

2SB1168

DESCRIPTION

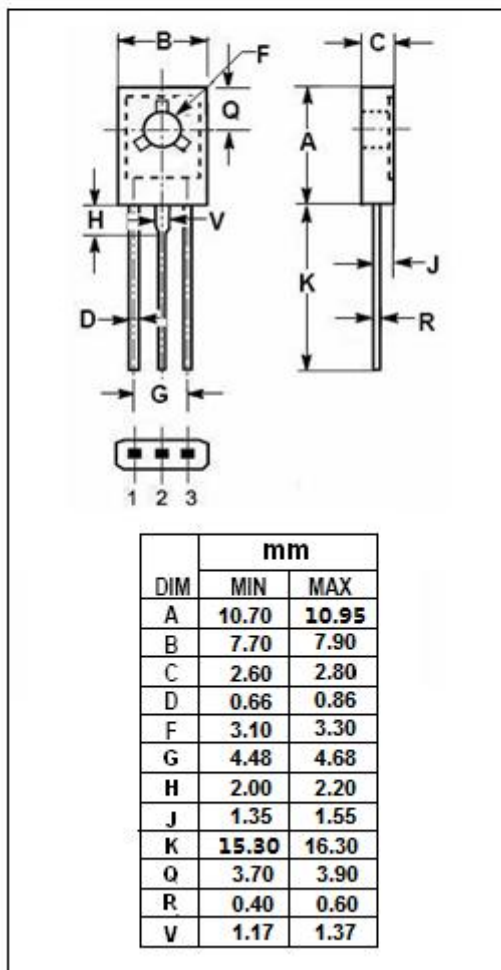
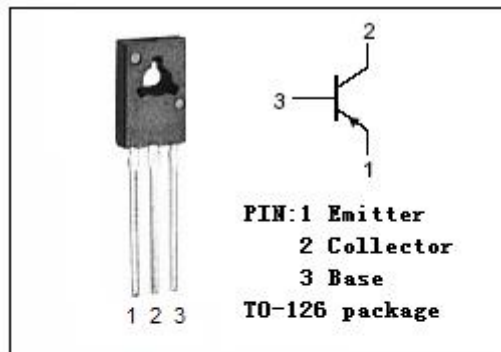
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = -0.5V(Max)@I_C = -2A$
- High f_T
- Good Linearity of h_{FE}
- Fast switching time
- Complement to Type 2SD1725
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for relay drivers, high-speed inverters and converters applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-120	V
V_{CEO}	Collector-Emitter Voltage	-100	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current-Continuous	-4	A
I_{CP}	Collector Current-Pulse	-8	A
P_C	Collector Power Dissipation @ $T_C=25^{\circ}C$	20	W
	Collector Power Dissipation @ $T_a=25^{\circ}C$	1.2	
T_J	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}C$



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ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = 0.1\text{mA}; I_C = 0$	6			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -1\text{mA}, R_{BE} = \infty$	-100			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = -0.1\text{mA}; I_E = 0$	-120			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -2\text{A}; I_B = -0.2\text{A}$			-0.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -2\text{A}; I_B = -0.2\text{A}$			-1.2	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -100\text{V}; I_E = 0$			-1.0	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -4\text{V}; I_C = 0$			-1.0	μA
h_{FE-1}	DC Current Gain	$I_C = -0.5\text{A}; V_{CE} = -5\text{V}$	70		400	
h_{FE-2}	DC Current Gain	$I_C = -3\text{A}; V_{CE} = -5\text{V}$	40			
f_T	Current-Gain—Bandwidth Product	$I_C = -0.5\text{A}; V_{CE} = -10\text{V}$		130		MHz
C_{OB}	Output Capacitance	$I_E = 0; V_{CB} = -10\text{V}, f_{\text{test}} = 1\text{MHz}$		65		pF

◆ h_{FE-1} Classifications

Q	R	S	T
70-140	100-200	140-280	200-400

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