

isc Silicon NPN Power Transistor

2SD1378

DESCRIPTION

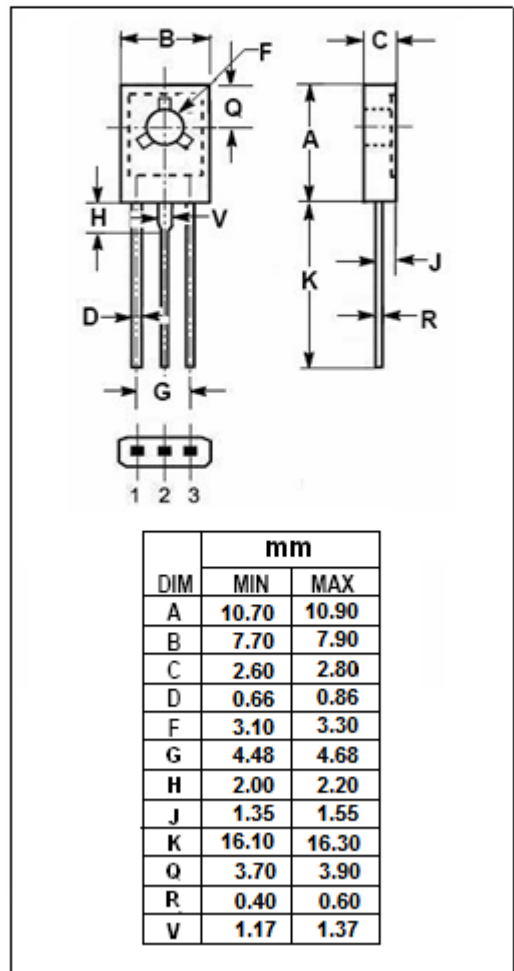
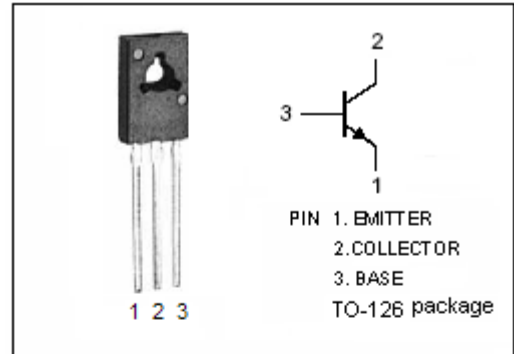
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 80V(\text{Min})$
- Low Saturation Voltage -
: $V_{CE(sat)} = 0.4V(\text{Max}) @ I_C = 0.5A$
- Complement to Type 2SB1007

APPLICATIONS

- Designed for low frequency power amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	0.7	A
P_C	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	1.2	W
	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	10	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Power Transistor**2SD1378****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=50\ \mu\text{A}; I_E=0$	80			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=2\text{mA}; I_B=0$	80			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=50\ \mu\text{A}; I_C=0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=0.5\text{A}; I_B=50\text{mA}$			0.4	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=50\text{V}; I_E=0$			0.5	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=4\text{V}; I_C=0$			0.5	μA
h_{FE}	DC Current Gain	$I_C=0.1\text{A}; V_{CE}=3\text{V}$	82		390	
f_T	Current-Gain—Bandwidth Product	$I_E=50\text{mA}; V_{CE}=10\text{V}$		120		MHz
C_{OB}	Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f_{test}=1\text{MHz}$		10		pF

◆ **h_{FE} Classifications**

P	Q	R
82-180	120-270	180-390