

isc Silicon PNP Power Transistor

BD788

DESCRIPTION

- DC Current Gain-
: $h_{FE} = 40\sim 250(\text{Min}) @ I_C = -0.2A$
- Collector-Emitter Sustaining Voltage -
: $V_{CEO(SUS)} = -60V(\text{Min})$
- Complement to type BD787

APPLICATIONS

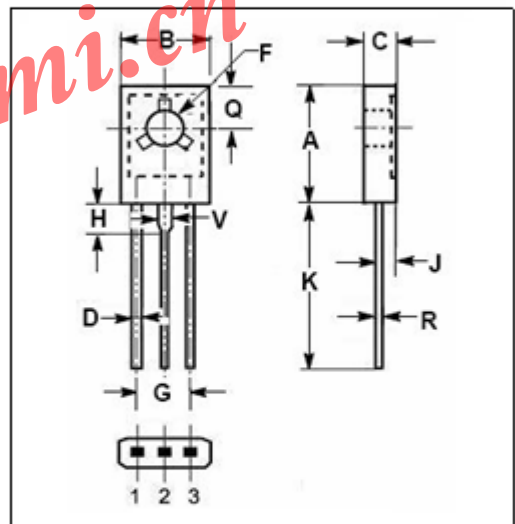
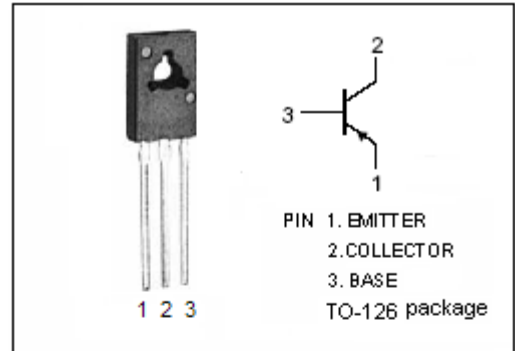
- Designed for low power audio amplifier and low current, high-speed switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-80	V
V_{CEO}	Collector-Emitter Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current-Continuous	-4	A
I_{CM}	Collector Current-Peak	-8	A
I_B	Base Current-Continuous	-1	A
P_C	Collector Power Dissipation @ $T_C=25^\circ C$	15	W
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-65~150	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	8.34	$^\circ C/W$



DIM	mm	
	MIN	MAX
A	10.70	10.90
B	7.70	7.90
C	2.60	2.80
D	0.66	0.86
F	3.10	3.30
G	4.48	4.68
H	2.00	2.20
J	1.35	1.55
K	16.10	16.30
Q	3.70	3.90
R	0.40	0.60
V	1.17	1.37

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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = -10\text{mA}; I_B = 0$	-60			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C = -0.5\text{A}; I_B = -50\text{mA}$			-0.4	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C = -1\text{A}; I_B = -0.1\text{A}$			-0.6	V
$V_{CE(sat)-3}$	Collector-Emitter Saturation Voltage	$I_C = -2\text{A}; I_B = -0.2\text{A}$			-0.8	V
$V_{CE(sat)-4}$	Collector-Emitter Saturation Voltage	$I_C = -4\text{A}; I_B = -0.8\text{A}$			-2.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -2\text{A}; I_B = 0.2\text{A}$			-2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -2\text{A}; V_{CE} = -3\text{V}$			-1.8	V
I_{CEX}	Collector Cutoff Current	$V_{CB} = -80\text{V}; V_{BE(off)} = -1.5\text{V}$ $V_{CB} = -40\text{V}; V_{BE(off)} = -1.5\text{V}; T_C = 125^\circ\text{C}$			-1.0 -0.1	μA mA
I_{CEO}	Collector Cutoff Current	$V_{CE} = -30\text{V}; I_B = 0$			-0.1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -6\text{V}; I_C = 0$			-1.0	μA
h_{FE-1}	DC Current Gain	$I_C = -0.2\text{A}; V_{CE} = -3\text{V}$	40		250	
h_{FE-2}	DC Current Gain	$I_C = -1\text{A}; V_{CE} = -3\text{V}$	25			
h_{FE-3}	DC Current Gain	$I_C = -2\text{A}; V_{CE} = -3\text{V}$	20			
h_{FE-4}	DC Current Gain	$I_C = -4\text{A}; V_{CE} = -3\text{V}$	5			
f_T	Current-Gain—Bandwidth Product	$I_C = -0.1\text{A}; V_{CE} = -10\text{V}$	50			MHz
C_{OB}	Collector Output Capacitance	$I_E = 0; V_{CB} = -10\text{V}; f = 0.1\text{MHz}$			70	pF