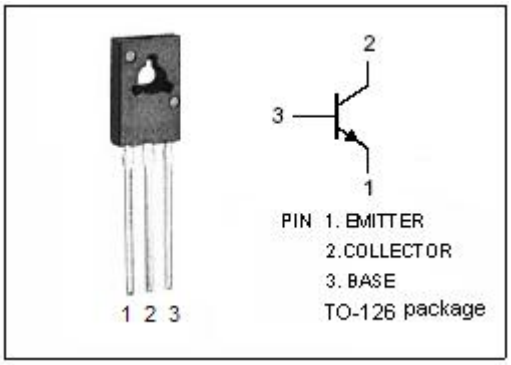
isc Silicon NPN Power Transistor — 2SD1609

DESCRIPTION

- High Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 160V(Min)
- Good Linearity of h_{FE}
- 100% avalanche tested
- Complement to Type 2SB1109
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

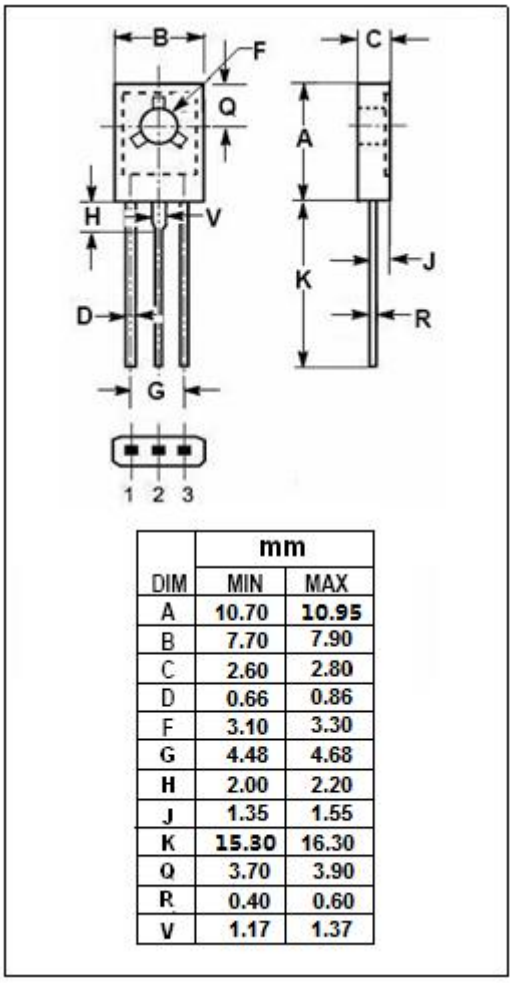


APPLICATIONS

- Designed for low frequency and high-voltage amplifier applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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	0.1	A
P_C	Collector Power Dissipation @ T_C=25℃	12.5	W
	Collector Power Dissipation @ T_a=25℃	1.25	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-45~150	℃



DIM	mm MIN	MAX
A	10.70	10.95
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	15.30	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℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= 0.1mA ; I_E= 0	160			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 1mA ; R_{BE}= ∞	160			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Vltage	I_E=0.1mA ; I_C=0	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 30mA; I_B= 3mA			2.0	V
$V_{BE(on)}$	Base-Emitter Saturation Voltage	I_C= 10mA ; V_{CE}= 5V			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 160V; I_E= 0			10	μA
h_{FE-1}	DC Current Gain	I_C= 10mA ; V_{CE}= 5V	60		320	
h_{FE-2}	DC Current Gain	I_C= 1mA ; V_{CE}= 5V	30			
f_T	Current-Gain—Bandwidth Product	I_C= 10mA ; V_{CE}= 5V		140		MHz
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V, f_{test}= 1MHz		14		pF

◆ **h_{FE-1} Classifications**

B	C	D
60-120	100-200	160-320

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