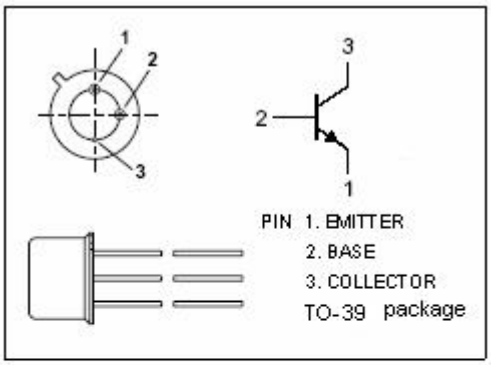
isc Silicon NPN Power Transistor 2N5109

DESCRIPTION

- High Current-Gain Bandwidth Product
  : f_T= 1200MHz (Min) @V_{CE} = 10V,I_E = 50mA
- Low Saturation Voltage
- Good Linearity of h_{FE}
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

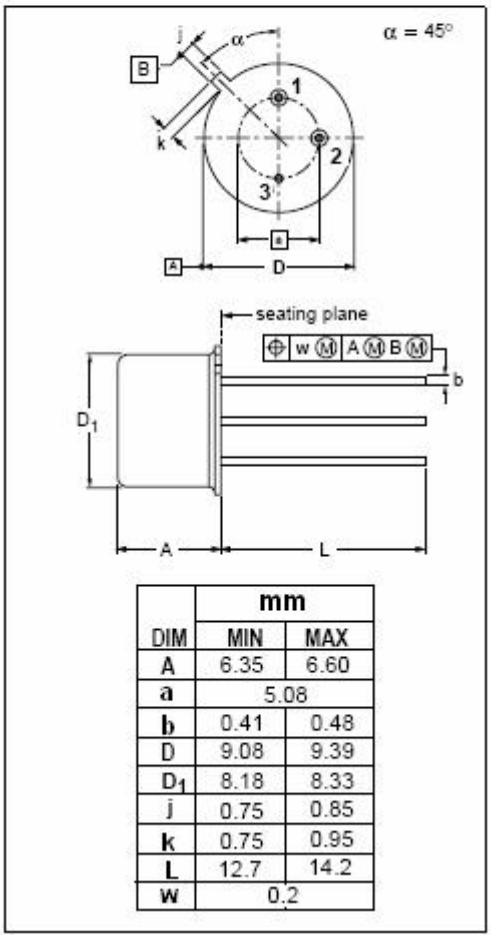


APPLICATIONS

- Designed for general purpose Class C amplifier applications up to 1 GHz

ABSOLUTE MAXIMUM RATINGS (T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	55	V
V_{CEO}	Collector-Emitter Voltage	35	V
V_{EBO}	Emitter-Base Voltage	4	V
I_C	Collector Current	0.4	A
P_C	Collector Power Dissipation @T_C=25℃	3.5	W
	Collector Power Dissipation @T_a=25℃	1.0	
T_j	Junction Temperature	175	℃
T_{stg}	Storage Temperature Range	-55~175	℃



DIM	mm MIN	MAX
A	6.35	6.60
a	5.08	
b	0.41	0.48
D	9.08	9.39
D_1	8.18	8.33
j	0.75	0.85
k	0.75	0.95
L	12.7	14.2
w	0.2	

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 100mA; I_B= 10mA			0.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 40V; I_E= 0			0.1	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 3V; I_C= 0			0.1	mA
h_{FE}	DC Current Gain	I_C= 10mA; V_{CE}= 10V	40		150	
f_T	Current-Gain—Bandwidth Product	I_C= 50mA;V_{CE}= 10V;f= 200MHz	1200			MHz
C_{OB}	Output Capacitance	I_E= 0;V_{CB}= 28V; f_{test}= 1.0MHz			3.3	pF