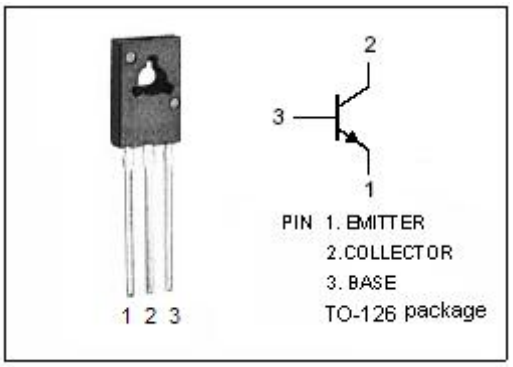
isc Silicon NPN Power Transistor — 2SC2314

DESCRIPTION

- Collector-Emitter Voltage-
  :V_{CER}= 75V(Min) ;R_{BE}=150 Ω
- Collector Current-
  :I_C=1.0A
- Low Saturation Voltage
  : $V_{CE(sat)}$=0.6V(MAX)@ I_C=0.5A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

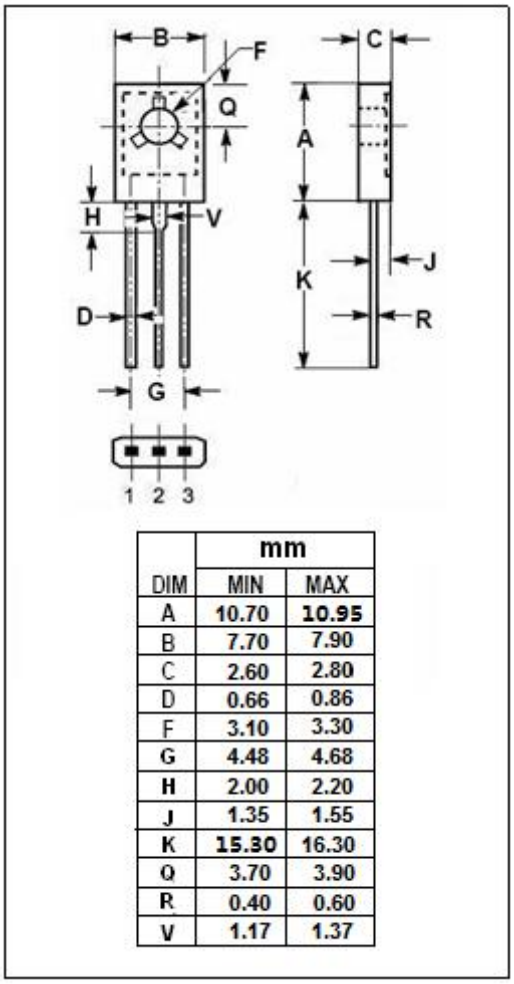


APPLICATIONS

- Power Amplifier Applications

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	75	V
V_{CER}	Collector-Emitter Voltage R_{BE}=150 Ω	75	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	1.0	A
I_{CM}	Collector Current-Peak	1.5	A
P_C	Collector Power Dissipation @ Tc=25℃	5	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	mm 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
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C=0.5A; I_B= 0.05A		0.2	0.6	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C=0.5A; I_B= 0.05A		0.9	1.2	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 40V ; I_E= 0			1	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			1	μA
h_{FE}	DC Current Gain	I_C= 500mA ; V_{CE}= 5V	60		320	
f_T	Current-Gain—Bandwidth Product	I_C= 50mA; V_{CE}= 10V	180			MHz
C_{OB}	Output Capacitance	I_E= 0 ; V_{CB}= 10V,f_{test}= 1MHz		15		pF

◆ **h_{FE} Classifications**

D	E	F
60-120	100-200	160-320