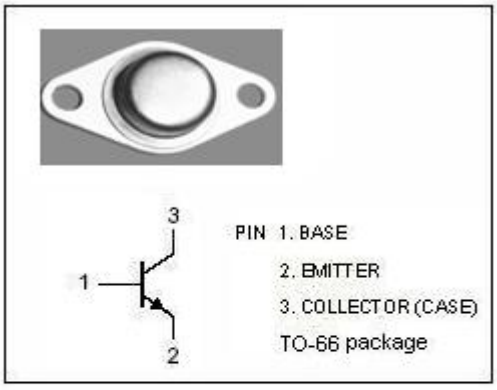
isc Silicon NPN Power Transistor — 2SC1024

DESCRIPTION

- DC Current Gain -h_{FE} = 25(Min)@ I_C= 1.0A
- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 50V(Min)
- Minimum Lot-to-Lot variations for robust device performance and reliable operation.

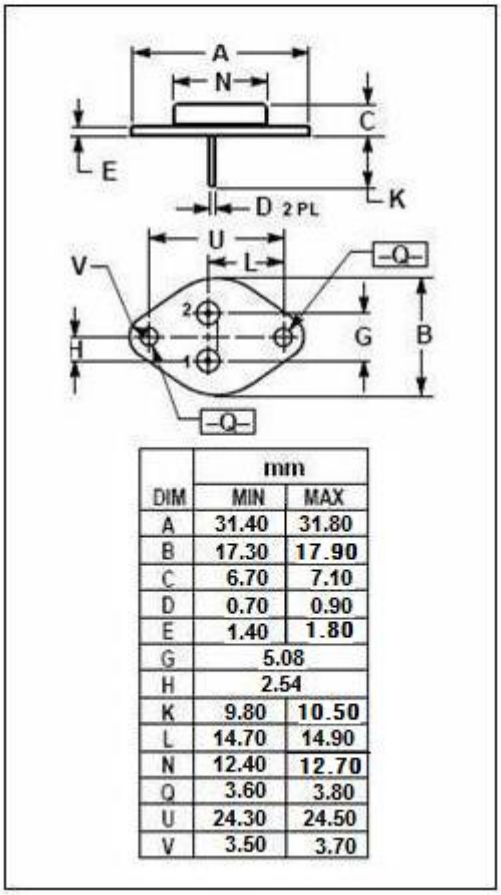


APPLICATIONS

- Designed for use in general purpose power amplifier and switching applications

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	3.0	A
I_{CM}	Collector Current-Peak	5.0	A
I_B	Base Current	1.0	A
P_C	Collector Power Dissipation @ T_C=25℃	25	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃



DIM	mm MIN	MAX
A	31.40	31.80
B	17.30	17.90
C	6.70	7.10
D	0.70	0.90
E	1.40	1.80
G	5.08	
H	2.54	
K	9.80	10.50
L	14.70	14.90
N	12.40	12.70
Q	3.60	3.80
U	24.30	24.50
V	3.50	3.70

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	5.0	℃/W

isc Silicon NPN Power Transistor 2SC1024

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 30mA ;I_B= 0	50		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 3A; I_B= 0.6A		1.2	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 3A ; V_{CE}= 4V		1.8	V
I_{CES}	Collector Cutoff Current	V_{CE}= 50V; V_{BE}= 0		0.2	mA
I_{CEO}	Collector Cutoff Current	V_{CE}= 30V;I_B= 0		0.3	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C=0		1.0	mA
h_{FE-1}	DC Current Gain	I_C= 1A ; V_{CE}= 4V	25		
h_{FE-2}	DC Current Gain	I_C= 3A ; V_{CE}= 4V	10		
f_T	Current-Gain—Bandwidth Product	I_C= 0.5A ; V_{CE}= 10V, f_{test}= 1.0MHz	3.0		MHz