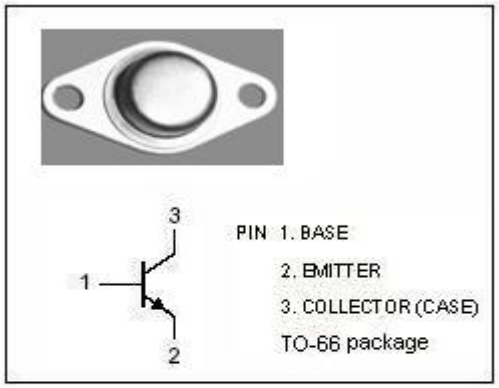
isc Silicon NPN Power Transistor 2N5202

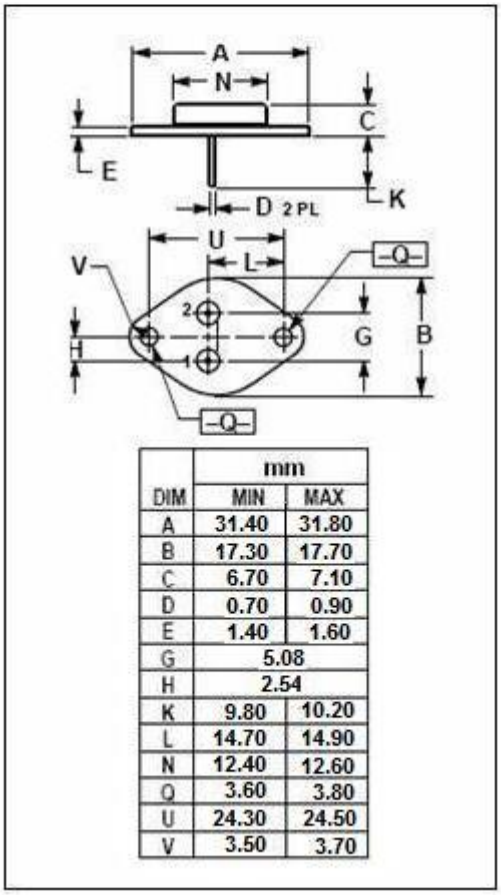
DESCRIPTION

- Collector-emitter sustaining voltage $V_{CEO(SUS)}$= 90V(Min)
- High saturation voltage
- Wide area of safe operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

- Designed for use in high-current, high-speed switching circuits such as:low-distortion power amplifiers,oscillators, switching regulators, series regulators, converters, and inverters.



DIM	mm MIN	MAX
A	31.40	31.80
B	17.30	17.70
C	6.70	7.10
D	0.70	0.90
E	1.40	1.60
G	5.08	
H	2.54	
K	9.80	10.20
L	14.70	14.90
N	12.40	12.60
Q	3.60	3.80
U	24.30	24.50
V	3.50	3.70

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
$V_{CEO(SUS)}$	Collector-Emitter Voltage	50	V
$V_{CER(SUS)}$	Collector-Emitter Voltage R_{BE}= 50Ω	75	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	4	A
I_{CM}	Collector Current-Peak	5	A
I_B	Base Current-Continuous	2	A
P_D	Total Power Dissipation@T_C=25℃	35	W
T_J	Junction Temperature	-65~200	℃
T_{stg}	Storage Temperature	-65~235	℃

THERMAL CHARACTERISTICS

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

isc Silicon NPN Power Transistor 2N5202

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 200mA; I_B= 0	50		V
$V_{CER(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 200mA; I_B= 0	75		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 4A; I_B= 0.4A		1.2	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 4A; I_B= 0.4A		2.0	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 70V; I_B= 0		10	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 6V; I_C= 0		10	mA
h_{FE1}	DC Current Gain	I_C= 0.5A; V_{CE}= 10V	6		
h_{FE2}	DC Current Gain	I_C= 4A; V_{CE}= 1.2V	10	100	