

isc Silicon NPN Power Transistor
2SC1024
DESCRIPTION

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

APPLICATIONS

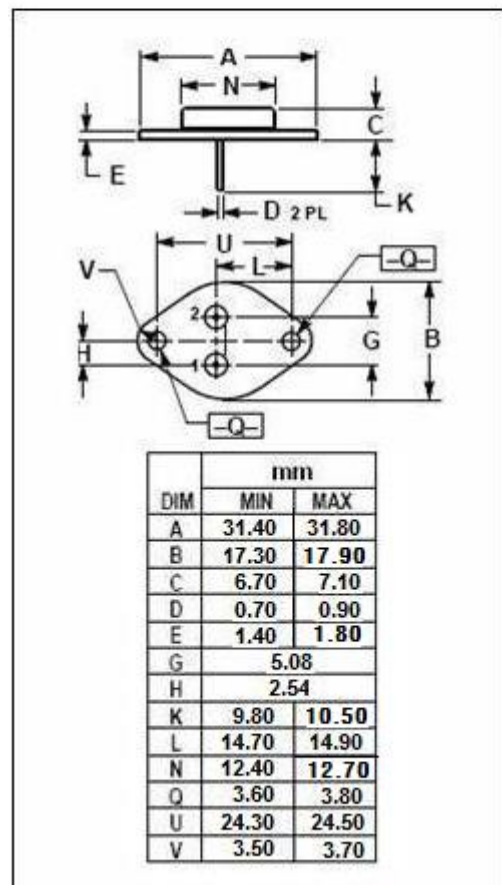
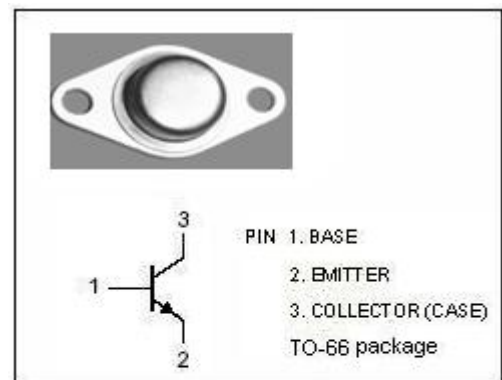
- Designed for use in general purpose power amplifier and switching applications

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

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 @ $T_C=25^\circ\text{C}$	25	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

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



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CE0(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

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