

isc Silicon PNP Power Transistor

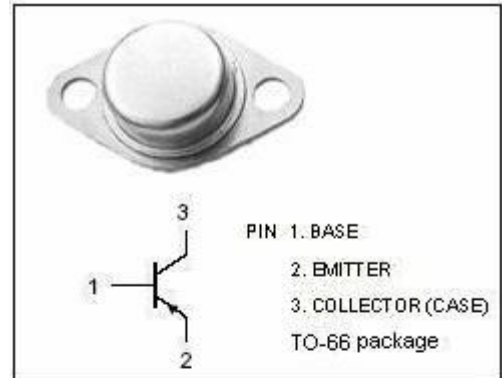
2N5344

DESCRIPTION

- High Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = -250V(\text{Min})$
- High Switching Speed
- High Current-Gain Bandwidth Product-
: $f_T = 60\text{MHz}(\text{Min}) @ I_C = -0.1A$

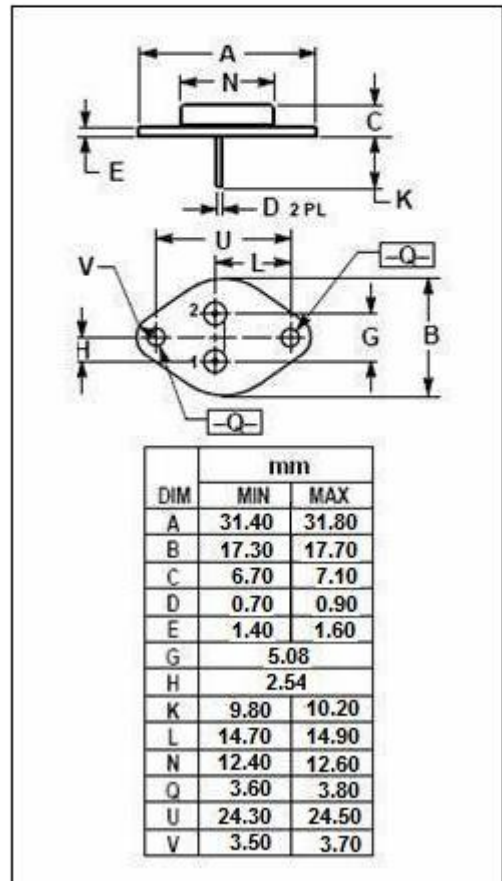
APPLICATIONS

- Designed for high voltage switching and amplifier applications.



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-250	V
V_{CEO}	Collector-Emitter Voltage	-250	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-1.0	A
I_B	Base Current-Continuous	-0.5	A
P_D	Total Power Dissipation@ $T_C=25^\circ\text{C}$	40	W
T_J	Junction Temperature	200	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~200	$^\circ\text{C}$



THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	4.38	$^\circ\text{C/W}$

isc Silicon PNP Power Transistor**2N5344****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = -10\text{mA}; I_B = 0$	-250		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -1\text{A}; I_B = -0.2\text{A}$		-3.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -1\text{A}; I_B = -0.2\text{A}$		-1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -250\text{V}; I_E = 0$		-0.1	mA
I_{CEX}	Collector Cutoff Current	$V_{CE} = -225\text{V}; V_{BE(off)} = -1.5\text{V}$ $V_{CE} = -225\text{V}; V_{BE(off)} = -1.5\text{V}, T_C = 150^\circ\text{C}$		-0.1 -1.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = 5\text{V}; I_C = 0$		-0.1	mA
h_{FE-1}	DC Current Gain	$I_C = -0.5\text{A}; V_{CE} = -5\text{V}$	25	100	
h_{FE-2}	DC Current Gain	$I_C = -1\text{A}; V_{CE} = -5\text{V}$	7		
f_T	Current-Gain—Bandwidth Product	$I_C = -0.1\text{A}; V_{CE} = -20\text{V}$	60		MHz
C_{OB}	Output Capacitance	$I_E = 0; V_{CB} = -10\text{V}$		200	pF

Switching times

t_{on}	Turn-On Time	$I_C = -0.5\text{A}, I_{B1} = -I_{B2} = -0.05\text{A};$ $V_{CC} = -100\text{V}$		0.2	μs
t_{off}	Turn-Off Time			0.7	μs