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Silicon PNP Power Transistor**2SA1044****DESCRIPTION**

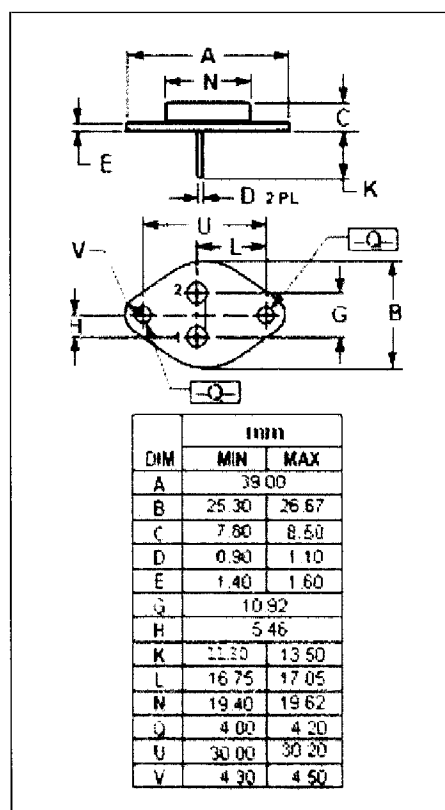
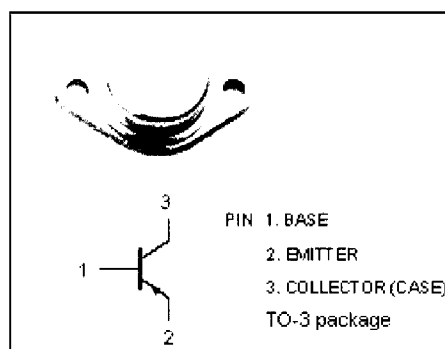
- High Collector-Emitter Breakdown Voltage-
 $V_{(BR)CEO} = -70V(\text{Min})$
- High Current Capability
- Wide Area of Safe Operation
- Complement to Type 2SC2434

APPLICATIONS

- Power switching applications
- High frequency power amplifier
- DC-DC converters

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-70	V
V_{CEO}	Collector-Emitter Voltage	-70	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-30	A
I_B	Base Current-Continuous	-10	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	150	W
T_J	Junction Temperature	175	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~175	$^\circ\text{C}$



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.



Quality Semi-Conductors

Silicon PNP Power Transistor

2SA1044

ELECTRICAL CHARACTERISTICS

 $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -10\text{mA}$; $R_{BE} = \infty$	-70			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = -50\mu\text{A}$; $I_E = 0$	-70			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = -1\text{mA}$; $I_C = 0$	-5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -15\text{A}$; $I_B = -1.5\text{A}$			-1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -15\text{A}$; $I_B = -1.5\text{A}$			-2.0	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -70\text{V}$; $I_E = 0$			-50	μA
I_{CEO}	Collector Cutoff Current	$V_{CE} = -70\text{V}$; $I_E = 0$			-1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -4\text{V}$; $I_C = 0$			-50	μA
h_{FE-1}	DC Current Gain	$I_C = -3\text{A}$; $V_{CE} = -5\text{V}$	35		200	
h_{FE-2}	DC Current Gain	$I_C = -30\text{A}$; $V_{CE} = -5\text{V}$	10			
C_{OB}	Output Capacitance	$I_E = 0$; $V_{CB} = -10\text{V}$; $f = 1.0\text{MHz}$		1000		pF
f_T	Current-Gain—Bandwidth Product	$I_C = -2\text{A}$; $V_{CE} = -10\text{V}$		60		MHz

Switching Times

t_r	Rise Time	$I_C = -15\text{A}$; $I_{B1} = -I_{B2} = -1.5\text{A}$; $R_L = 2\Omega$		0.10		μs
t_{stg}	Storage Time			0.10		μs
t_f	Fall Time			0.10		μs