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Silicon NPN Power Transistor

2SC2344

DESCRIPTION

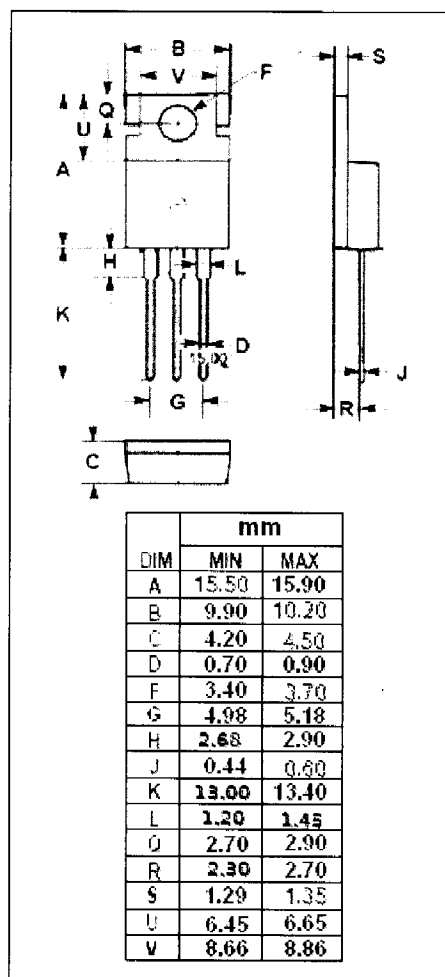
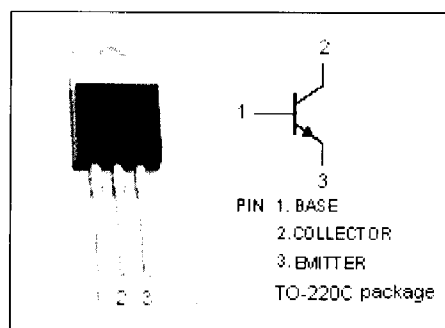
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 0.3V(\text{Typ.}) @ I_C = 0.5A$
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 160V(\text{Min.})$
- Complement to Type 2SA1011

APPLICATIONS

- Designed for high-voltage switching, audio frequency power amplifiers, 100W output predriver applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	180	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	1.5	A
I_{CM}	Collector Current-Peak	3.0	A
P_C	Total Power Dissipation@ $T_C = 25^\circ\text{C}$	25	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



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

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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	$I_C=1\text{mA}; R_{BE}=\infty$	160			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=1\text{mA}; I_E=0$	180			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=10\text{mA}; I_C=0$	6			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=0.5\text{A}; I_B=50\text{mA}$		0.5		V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=10\text{mA}; V_{CE}=5\text{V}$		1.5		V
I_{CBO}	Collector Cutoff Current	$V_{CB}=120\text{V}; I_E=0$			10	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=4\text{V}; I_C=0$			10	μA
h_{FE}	DC Current Gain	$I_C=0.3\text{A}; V_{CE}=5\text{V}$	60		200	
f_T	Current-Gain—Bandwidth Product	$I_C=50\text{mA}; V_{CE}=10\text{V}$		100		MHz
C_{OB}	Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f_{test}=1.0\text{MHz}$		23		pF

Switching Times

t_{on}	Turn-On Time	$I_C=0.5\text{A}, I_{B1}=-I_{B2}=50\text{mA}$		0.15		μs
t_{stg}	Storage Time			0.81		μs
t_f	Fall Time			0.48		μs

◆ h_{FE} Classifications

D	E
60-120	100-200