

# New Jersey Semi-Conductor Products, Inc.

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## Silicon NPN Power Transistor

## 2SC3256

### DESCRIPTION

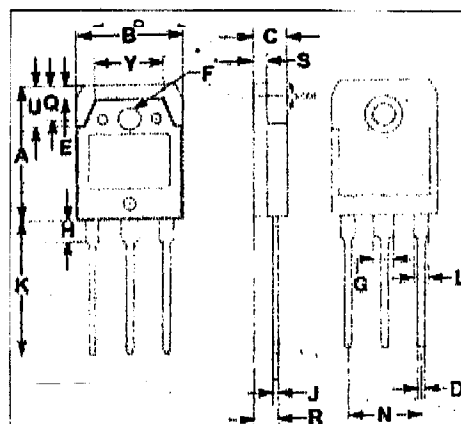
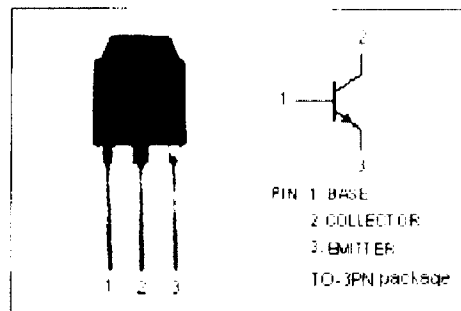
- Low Collector Saturation Voltage
- Good Linearity of  $h_{FE}$
- High Switching Speed
- Complement to Type 2SA1292

### APPLICATIONS

- Various inductance lamp drivers for electrical equipment
- Inverters, converters
- Power amplifier
- Switching regulator, driver

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CB0}$	Collector-Base Voltage	80	V
$V_{CE0}$	Collector-Emitter Voltage	60	V
$V_{EB0}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	15	A
$I_{CP}$	Collector Current-Pulse	20	A
$P_C$	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	80	W
$T_j$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



DIM	mm	
	MIN	MAX
A	19.90	20.10
B	15.38	15.42
C	4.75	4.85
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.98	3.02
H	3.20	3.40
J	0.595	0.605
K	19.95	20.25
L	1.98	2.02
N	10.89	10.91
J	4.95	5.05
R	3.35	3.45
S	1.995	2.005
Y	5.90	6.10
Y	9.90	10.10



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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	$I_C=1\text{mA}; R_{BE}=\infty$	60			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=1\text{mA}; I_E=0$	80			V
$V_{(BR)EB0}$	Emitter-Base Breakdown Voltage	$I_E=1\text{mA}; I_C=0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=7.5\text{A}; I_B=0.375\text{A}$			0.4	V
$I_{CBO}$	Collector Cutoff Current	$V_{CE}=40\text{V}; I_E=0$			100	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=4\text{V}; I_C=0$			100	$\mu\text{A}$
$h_{FE}$	DC Current Gain	$I_C=1\text{A}; V_{CE}=2\text{V}$	70		260	
f <sub>t</sub>	Current-Gain—Bandwidth Product	$I_C=1\text{A}; V_{CE}=5\text{V}$		100		MHz

## Switching times

$t_{on}$	Turn-on Time			0.1		$\mu\text{s}$
$t_{stg}$	Storage Time	$I_C=6\text{A}; I_{B1}=-I_{B2}=0.3\text{A}$ $R_L=3.3\Omega; V_{CC}=20\text{V}$		0.5		$\mu\text{s}$
$t_f$	Fall Time			0.1		$\mu\text{s}$

◆  $h_{FE}$  Classifications

Q	R	S
70-140	100-200	140-280