

*New Jersey Semi-Conductor Products, Inc.*

20 STERN AVE.  
SPRINGFIELD, NEW JERSEY 07081  
U.S.A.

TELEPHONE: (973) 376-2922  
(212) 227-6005  
FAX: (973) 376-8960

## Silicon NPN Power Transistor

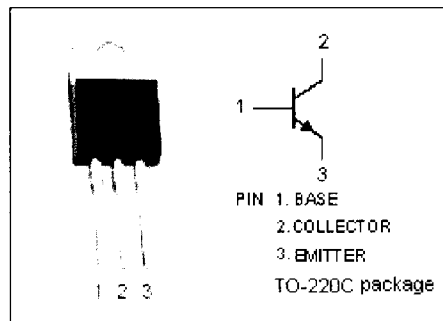
## 2SC3254

### DESCRIPTION

- Low Collector Saturation Voltage
- Good Linearity of  $h_{FE}$
- High Switching Speed
- Complement to Type 2SA1290

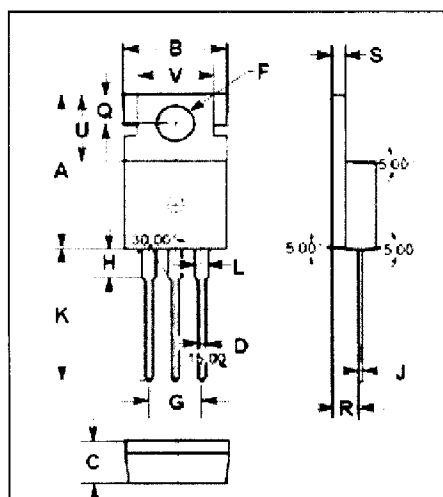
### APPLICATIONS

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

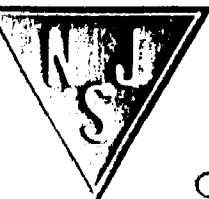


### ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	80	V
$V_{CEO}$	Collector-Emitter Voltage	60	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	7	A
$I_{CM}$	Collector Current-Pulse	10	A
$P_C$	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	35	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



DIM	mm	
	MIN	MAX
A	15.70	15.90
B	9.90	10.10
C	4.20	4.40
D	0.70	0.90
F	3.40	3.60
G	4.98	5.18
H	2.70	2.90
J	0.44	0.46
K	13.20	13.40
L	1.10	1.30
Q	2.70	2.90
R	2.50	2.70
S	1.29	1.31
U	6.45	6.65
V	8.66	8.86



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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
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=1\text{mA}; I_C=0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=3.5\text{A}; I_B=0.175\text{A}$			0.4	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=40\text{V}; I_E=0$			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		280	
$f_T$	Current-Gain—Bandwidth Product	$I_C=1\text{A}; V_{CE}=5\text{V}$		100		MHz

## Switching times

$t_{on}$	Turn-on Time	$I_C=3\text{A}; I_{B1}=-I_{B2}=0.15\text{A}; R_L=6.67\Omega; V_{CC}=20\text{V}$		0.1		$\mu\text{s}$
$t_{stg}$	Storage Time			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