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Silicon NPN Power Transistor

2SC1514

DESCRIPTION

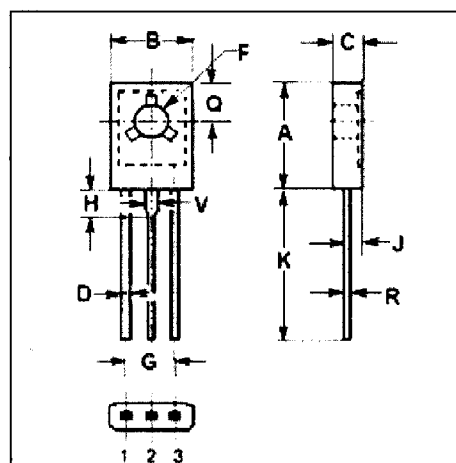
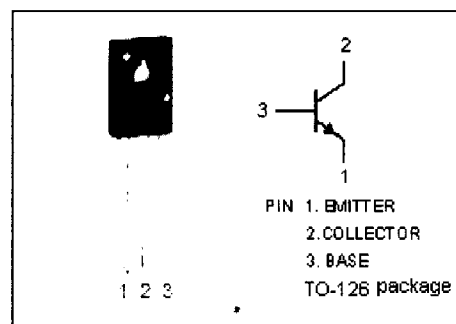
- High Collector-Emitter Breakdown Voltage:
: $V_{(BR)CEO} = 300V(\text{Min})$
- Good Linearity of h_{FE}
- Low Saturation Voltage

APPLICATIONS

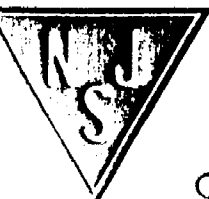
- Designed for use in high frequency high voltage amplifier and TV video output applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	300	V
V_{CEO}	Collector-Emitter Voltage	300	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	0.1	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	10	W
	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	1.25	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-40~150	$^\circ\text{C}$



DIM	mm	
	MIN	MAX
A	10.70	10.90
B	7.70	7.90
C	2.60	2.80
D	0.66	0.86
F	3.10	3.30
G	4.48	4.68
H	2.00	2.20
J	1.35	1.55
K	16.10	16.30
O	3.70	3.90
R	0.40	0.60
V	1.17	1.37



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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
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = 10\ \mu\text{A}; I_E = 0$	300			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 1\text{mA}; R_{BE} = \infty$	300			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = 10\ \mu\text{A}; I_C = 0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 20\text{mA}; I_B = 2\text{mA}$			1.5	V
I_{CEO}	Collector Cutoff Current	$V_{CE} = 250\text{V}; R_{BE} = \infty$			1	μA
h_{FE}	DC Current Gain	$I_C = 20\text{mA}; V_{CE} = 20\text{V}$	30		200	
f_T	Current-Gain—Bandwidth Product	$I_C = 20\text{mA}; V_{CE} = 20\text{V}$		80		MHz
C_{OB}	Output Capacitance	$I_E = 0; V_{CB} = 20\text{V}; f_{test} = 1\text{MHz}$			4	pF