

**Silicon PNP Power Transistor**

**BD950F/952F/954F/956F**

**DESCRIPTION**

- DC Current Gain-  
 $h_{FE} = 40(\text{Min}) @ I_C = -500\text{mA}$
- Complement to Type BD949F/951F/953F/955F

**APPLICATIONS**

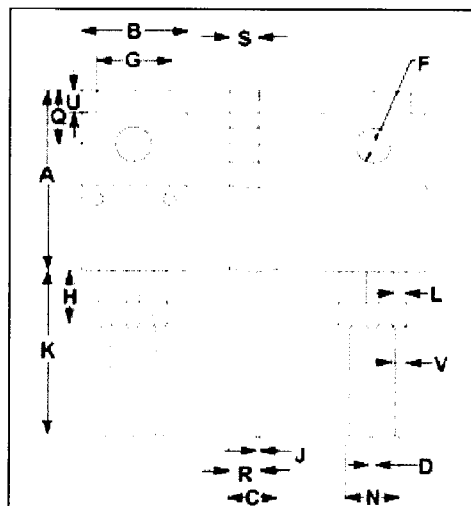
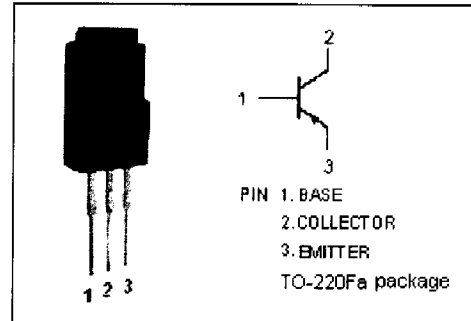
- Designed for power amplifier and switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT	
$V_{CBO}$	Collector-Base Voltage	BD950F	-60	V
		BD952F	-80	
		BD954F	-100	
		BD956F	-120	
$V_{CEO}$	Collector-Emitter Voltage	BD950F	-60	V
		BD952F	-80	
		BD954F	-100	
		BD956F	-120	
$V_{EBO}$	Emitter-Base Voltage	-5	V	
$I_C$	Collector Current-Continuous	-5	A	
$I_{CM}$	Collector Current-Peak	-8	A	
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	22	W	
$T_J$	Junction Temperature	150	$^\circ\text{C}$	
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ\text{C}$	

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	8.12	$^\circ\text{C/W}$



DIM	mm	
	MIN	MAX
A	16.85	17.15
B	9.90	10.10
C	4.35	4.65
D	0.75	0.80
F	3.20	3.40
G	6.90	7.10
H	5.15	5.45
J	0.45	0.75
K	13.35	13.65
L	1.10	1.30
N	4.98	5.18
Q	4.85	5.15
R	2.95	3.25
S	2.70	2.90
U	1.75	2.05
V	1.30	1.50

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.

# Silicon PNP Power Transistor

# BD950F/952F/954F/956F

## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(SUS)}$	Collector-Emitter Sustaining Voltage	BD950F	-60			V
		BD952F	-80			
		BD954F	-100			
		BD956F	-120			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -2A; I_B = -0.2A$			-1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -2A; V_{CE} = -4V$			-1.4	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = V_{CB0max}; I_E = 0$ $V_{CB} = \frac{1}{2}V_{CB0max}; I_E = 0, T_J = 150^\circ\text{C}$			-0.05 -1	mA
$I_{CEO}$	Collector Cutoff Current	$V_{CE} = \frac{1}{2}V_{CE0max}; I_B = 0$			-0.1	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5V; I_C = 0$			-0.2	mA
$h_{FE-1}$	DC Current Gain	$I_C = -500mA; V_{CE} = -4V$	40			
$h_{FE-2}$	DC Current Gain	$I_C = -2A; V_{CE} = -4V$		20		
$f_T$	Current-Gain—Bandwidth Product	$I_C = -500mA; V_{CE} = -4V$	3			MHz

### Switching Times

$t_{on}$	Turn-On Time	$I_C = -1.0A; I_{B1} = -I_{B2} = -0.1A$		0.3		$\mu\text{s}$
$t_{off}$	Turn-Off Time			1.5		$\mu\text{s}$