

INCHANGE Semiconductor

isc Product Specification

isc 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

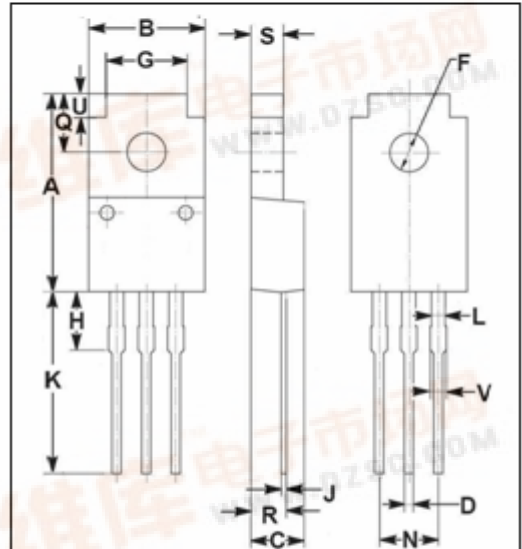
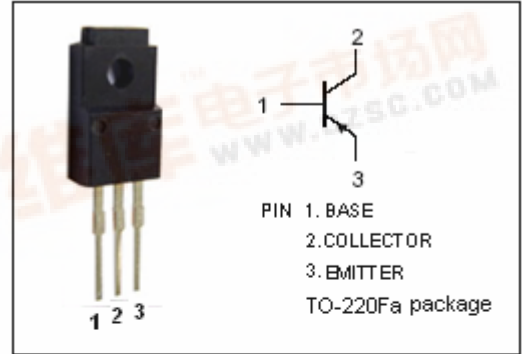
- Designed for power amplifier and switching applications

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



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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	$I_C = -100\text{mA}; I_B = 0$	BD950F	-60			V
			BD952F	-80			
			BD954F	-100			
			BD956F	-120			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -2\text{A}; I_B = -0.2\text{A}$			-1.0	V	
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -2\text{A}; V_{CE} = -4\text{V}$			-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	$V_{EB} = -5\text{V}; I_C = 0$			-0.2	mA	
h_{FE-1}	DC Current Gain	$I_C = -500\text{mA}; V_{CE} = -4\text{V}$	40				
h_{FE-2}	DC Current Gain	$I_C = -2\text{A}; V_{CE} = -4\text{V}$		20			
f_T	Current-Gain—Bandwidth Product	$I_C = -500\text{mA}; V_{CE} = -4\text{V}$	3			MHz	

Switching Times

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