

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

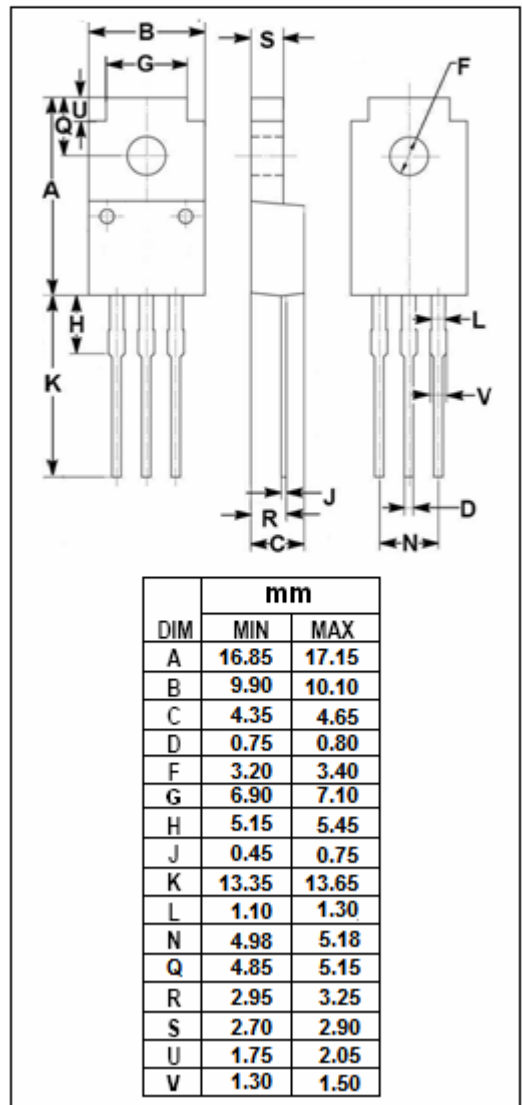
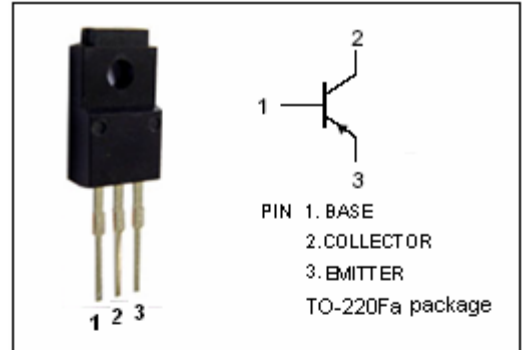
- Designed for power amplifier and switching applications

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	$^\circ\text{C/W}$



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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		$\mu\text{s}$
$t_{off}$	Turn-Off Time			1.5		$\mu\text{s}$