

isc Silicon PNP Power Transistor

BD944/946/948

DESCRIPTION

- DC Current Gain-
: $h_{FE} = 85(\text{Min}) @ I_C = -500\text{mA}$
- Complement to Type BD943/945/947

APPLICATIONS

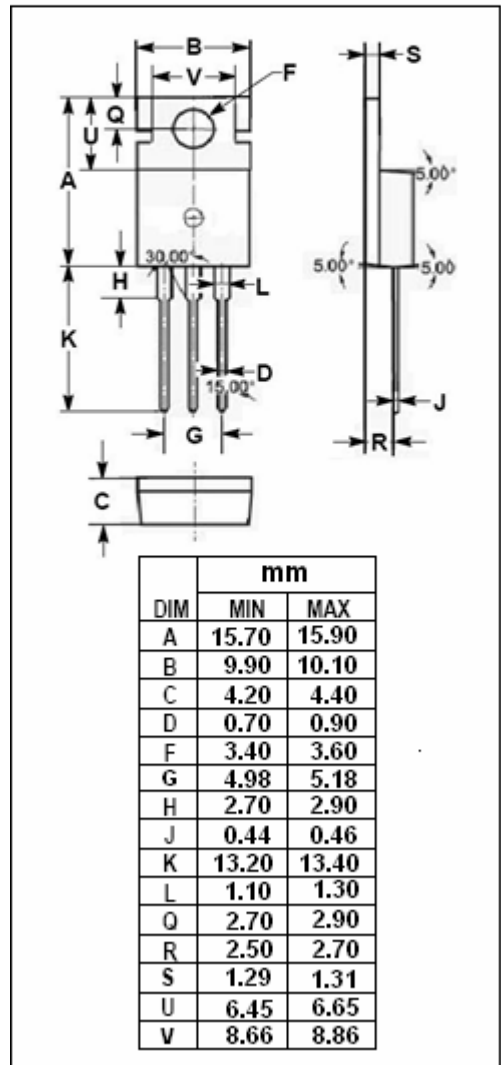
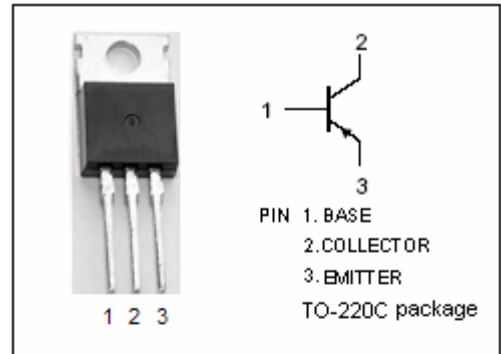
- Designed for use in audio output stages and general purpose amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT	
V_{CBO}	Collector-Base Voltage	BD944	-22	V
		BD946	-32	
		BD948	-45	
V_{CEO}	Collector-Emitter Voltage	BD944	-22	V
		BD946	-32	
		BD948	-45	
V_{EBO}	Emitter-Base Voltage	-5	V	
I_C	Collector Current-Continuous	-5	A	
I_{CM}	Collector Current-Peak	-8	A	
I_B	Base Current-Continuous	-1	A	
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	40	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	3.12	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	70	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	BD944	$I_C = -100\text{mA}; I_B = 0$	-22			V
		BD946		-32			
		BD948		-45			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	BD944/946	$I_C = -2\text{A}; I_B = -0.2\text{A}$			-0.5	V
		BD948	$I_C = -3\text{A}; I_B = -0.3\text{A}$			-0.7	
$V_{BE(on)}$	Base-Emitter On Voltage	BD944/946	$I_C = -2\text{A}; V_{CE} = -1\text{V}$			-1.1	V
		BD948	$I_C = -3\text{A}; V_{CE} = -1\text{V}$			-1.3	
I_{CBO}	Collector Cutoff Current		$V_{CB} = V_{CB0max}; I_E = 0$ $V_{CB} = V_{CB0max}; I_E = 0, T_J = 150^{\circ}\text{C}$			-0.05 -1	mA
I_{CEO}	Collector Cutoff Current	BD944	$V_{CE} = -15\text{V}; I_B = 0$			-0.1	mA
		BD946	$V_{CE} = -20\text{V}; I_B = 0$				
		BD948	$V_{CE} = -25\text{V}; I_B = 0$				
I_{EBO}	Emitter Cutoff Current		$V_{EB} = -5\text{V}; I_C = 0$			-0.2	mA
h_{FE-1}	DC Current Gain		$I_C = -10\text{mA}; V_{CE} = -5\text{V}$	25			
h_{FE-2}	DC Current Gain		$I_C = -500\text{mA}; V_{CE} = -1\text{V}$	85		475	
h_{FE-3}	DC Current Gain	BD944/946	$I_C = -2\text{A}; V_{CE} = -1\text{V}$	50			
		BD948		40			
h_{FE-4}	DC Current Gain-- Only For BD948		$I_C = -3\text{A}; V_{CE} = -1\text{V}$	30			
f_T	Current-Gain—Bandwidth Product		$I_C = -250\text{mA}; V_{CE} = -1\text{V}$	3			MHz