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Silicon PNP Power Transistor

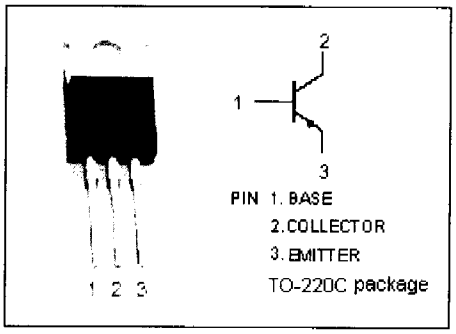
BD944/946/948

DESCRIPTION

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

APPLICATIONS

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

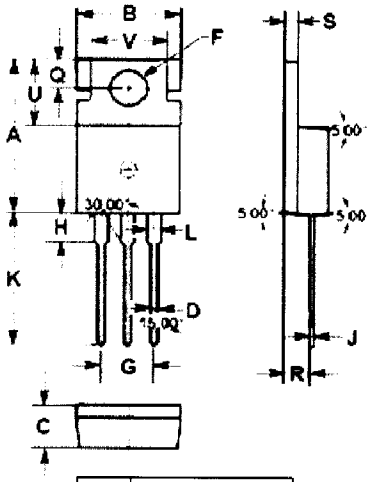


ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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℃		40	W
T_J	Junction Temperature		150	℃
T_{stg}	Storage Temperature Range		-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	3.12	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	70	℃/W



DIM	mm MIN	mm MAX
A	15.70	15.90
B	9.90	10.10
C	4.20	4.40
D	0.70	0.90
F	3.40	3.60
G	4.98	5.18
H	2.70	2.90
J	0.44	0.46
K	13.20	13.40
L	1.10	1.30
Q	2.70	2.90
R	2.50	2.70
S	1.29	1.31
U	6.45	6.65
V	8.66	8.86

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

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