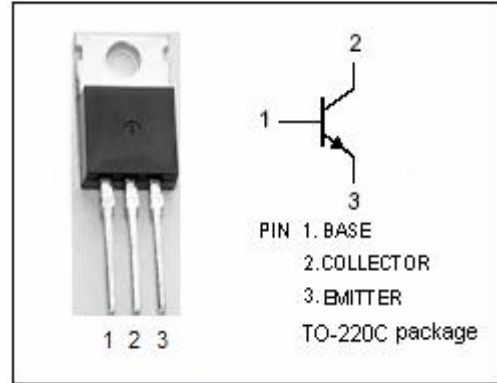


isc Silicon NPN Power Transistor
BD943/945/947
DESCRIPTION

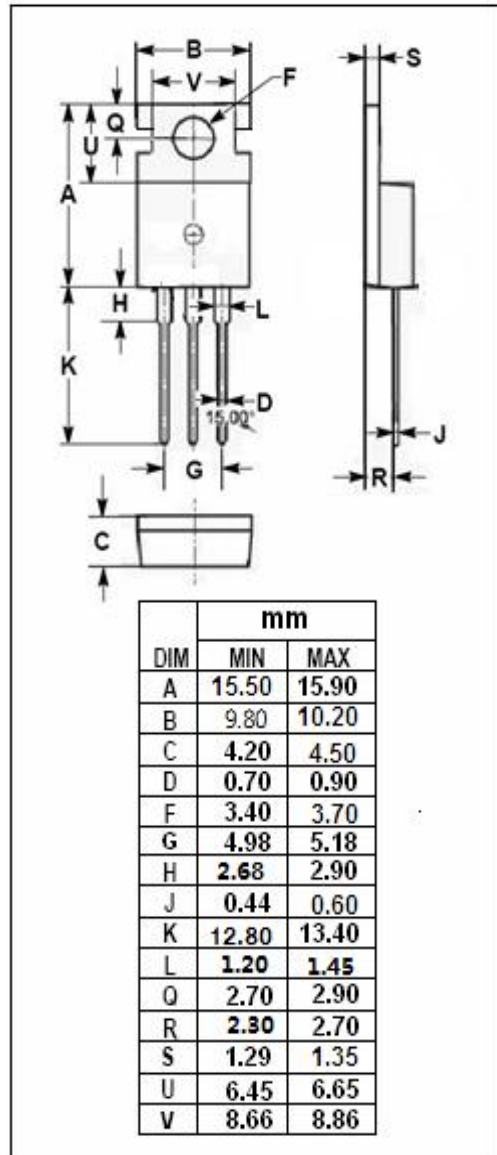
- DC Current Gain-
: $h_{FE} = 85(\text{Min}) @ I_C = 500\text{mA}$
- Complement to Type BD944/946/948
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

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	BD943	22	V
		BD945	32	
		BD947	45	
V_{CEO}	Collector-Emitter Voltage	BD943	22	V
		BD945	32	
		BD947	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	$^\circ\text{C/W}$

isc Silicon NPN Power Transistor
BD943/945/947
ELECTRICAL CHARACTERISTICS

 T_C=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	BD943	I _C = 30mA ; I _B = 0	22			V
		BD945		32			
		BD947		45			
V _{CE(sat)}	Collector-Emitter Saturation Voltage	BD943/945	I _C = 2A; I _B = 0.2A			0.5	V
		BD947	I _C = 3A; I _B = 0.3A			0.7	
V _{BE(on)}	Base-Emitter On Voltage	BD943/945	I _C = 2A; V _{CE} = 1V			1.1	V
		BD947	I _C = 3A; V _{CE} = 1V			1.3	
I _{CBO}	Collector Cutoff Current		V _{CB} = V _{CB0max} ; I _E = 0 V _{CB} = V _{CB0max} ; I _E = 0, T _J =150°C			0.05 1.0	mA
I _{CEO}	Collector Cutoff Current	BD943	V _{CE} = 15V; I _B = 0			0.1	mA
		BD945	V _{CE} = 20V; I _B = 0				
		BD947	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	BD943/945	I _C = 2A ; V _{CE} = 1V	50			
		BD947		40			
h _{FE-4}	DC Current Gain-- Only For BD947		I _C = 3A ; V _{CE} = 1V	30			

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