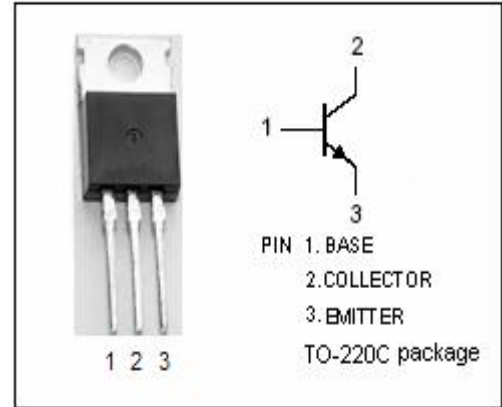


isc Silicon NPN Power Transistor
BD933/935/937/939/941
DESCRIPTION

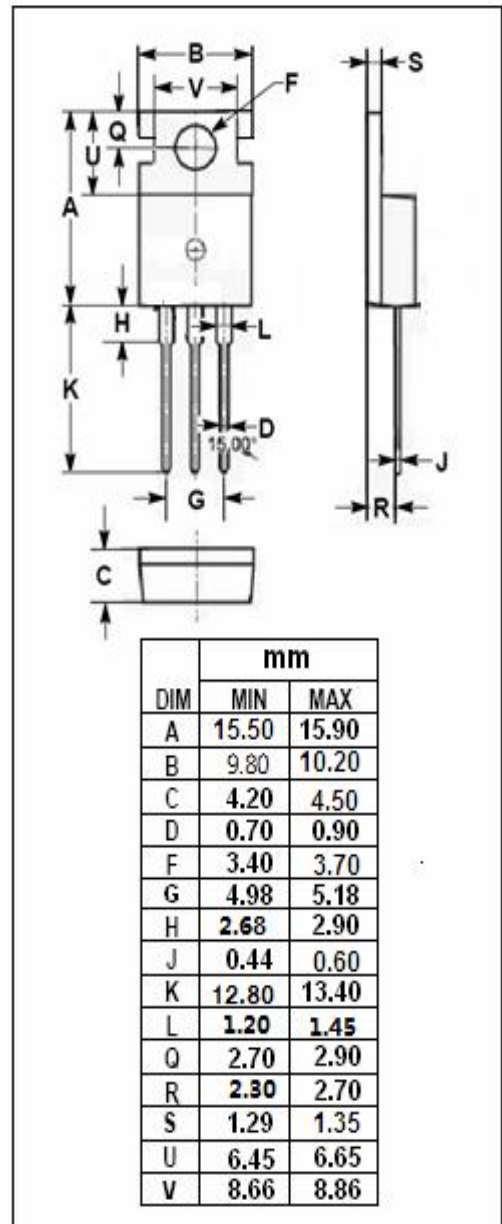
- DC Current Gain-
: $h_{FE} = 40(\text{Min}) @ I_C = 150\text{mA}$
- Complement to Type BD934/936/938/940/942
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for use in output stages of audio and television amplifier circuits where high peak powers can occur.


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

SYMBOL	PARAMETER	VALUE	UNIT	
V_{CBO}	Collector-Base Voltage	BD933	45	V
		BD935	60	
		BD937	100	
		BD939	120	
		BD941	140	
V_{CEO}	Collector-Emitter Voltage	BD933	45	V
		BD935	60	
		BD937	80	
		BD939	100	
		BD941	120	
V_{EBO}	Emitter-Base Voltage	5	V	
I_C	Collector Current-Continuous	3	A	
I_{CM}	Collector Current-Peak	7	A	
I_B	Base Current-Continuous	0.5	A	
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	30	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	4.17	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	70	$^\circ\text{C/W}$

isc Silicon NPN Power Transistor

BD933/935/937/939/941

ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	BD933	I _C = 30mA ; I _B = 0	45			V
		BD935		60			
		BD937		80			
		BD939		100			
		BD941		120			
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 1A; I _B = 0.1A			0.6	V	
V _{BE(on)}	Base-Emitter On Voltage	I _C = 1A; V _{CE} = 2V			1.3	V	
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	mA	
I _{CEO}	Collector Cutoff Current	V _{CE} = V _{CE0max} ; I _B = 0			0.1	mA	
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			0.2	mA	
h _{FE-1}	DC Current Gain	I _C = 150mA; V _{CE} = 2V	40		250		
h _{FE-2}	DC Current Gain	I _C = 1A; V _{CE} = 2V	25				

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