

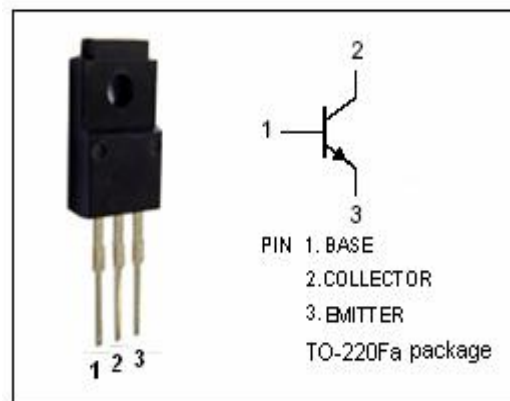
isc Silicon NPN Power Transistor BD933F/935F/937F/939F/941F

DESCRIPTION

- DC Current Gain-
: $h_{FE} = 40(\text{Min}) @ I_C = 150\text{mA}$
- Complement to Type BD934F/936F/938F/940F/942F
- 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.

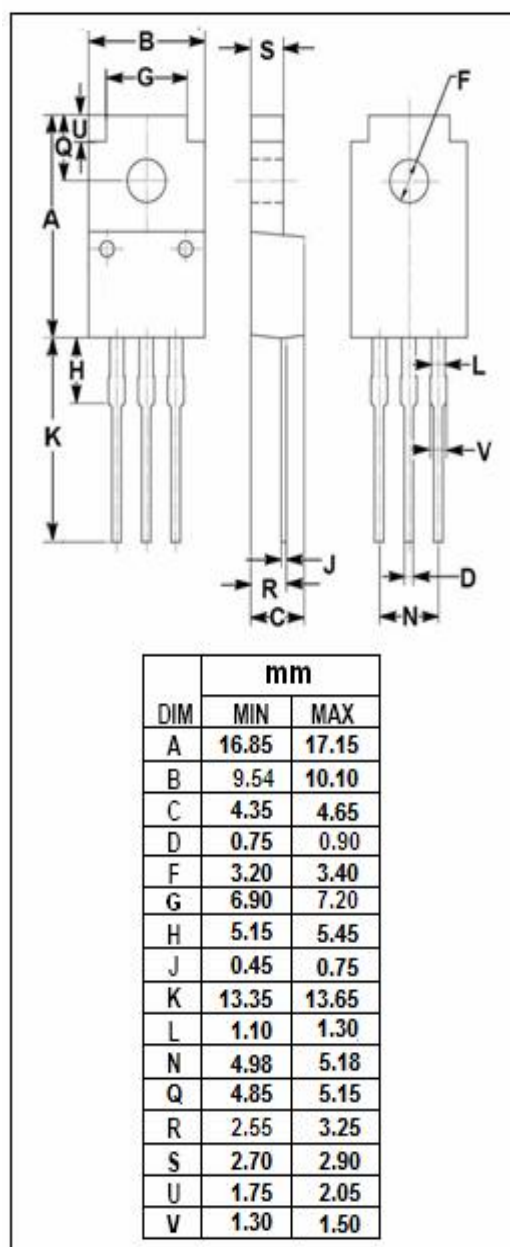


ABSOLUTE MAXIMUM RATINGS($T_a = 25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	BD933F	45
		BD935F	60
		BD937F	100
		BD939F	120
		BD941F	140
V_{CEO}	Collector-Emitter Voltage	BD933F	45
		BD935F	60
		BD937F	80
		BD939F	100
		BD941F	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 @ $T_C = 25^\circ\text{C}$	19	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	55	$^\circ\text{C/W}$



isc Silicon NPN Power Transistor**BD933F/935F/937F/939F/941F****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	BD933F	$I_C=30\text{mA}; I_B=0$	45			V
		BD935F		60			
		BD937F		80			
		BD939F		100			
		BD941F		120			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage		$I_C=1\text{A}; I_B=0.1\text{A}$			0.6	V
$V_{BE(on)}$	Base-Emitter On Voltage		$I_C=1\text{A}; V_{CE}=2\text{V}$			1.3	V
I_{CBO}	Collector Cutoff Current		$V_{CB}=V_{CB0max}; I_E=0$ $V_{CB}=V_{CB0max}; I_E=0, T_J=150^{\circ}\text{C}$			0.1 3.0	mA
I_{CEO}	Collector Cutoff Current		$V_{CE}=V_{CE0max}; I_B=0$			0.5	mA
I_{EBO}	Emitter Cutoff Current		$V_{EB}=5\text{V}; I_C=0$			1.0	mA
h_{FE-1}	DC Current Gain		$I_C=150\text{mA}; V_{CE}=2\text{V}$	40		250	
h_{FE-2}	DC Current Gain		$I_C=1\text{A}; V_{CE}=2\text{V}$	25			

NOTICE:

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.