

**isc Silicon NPN Power Transistor**

**2SD1833**

**DESCRIPTION**

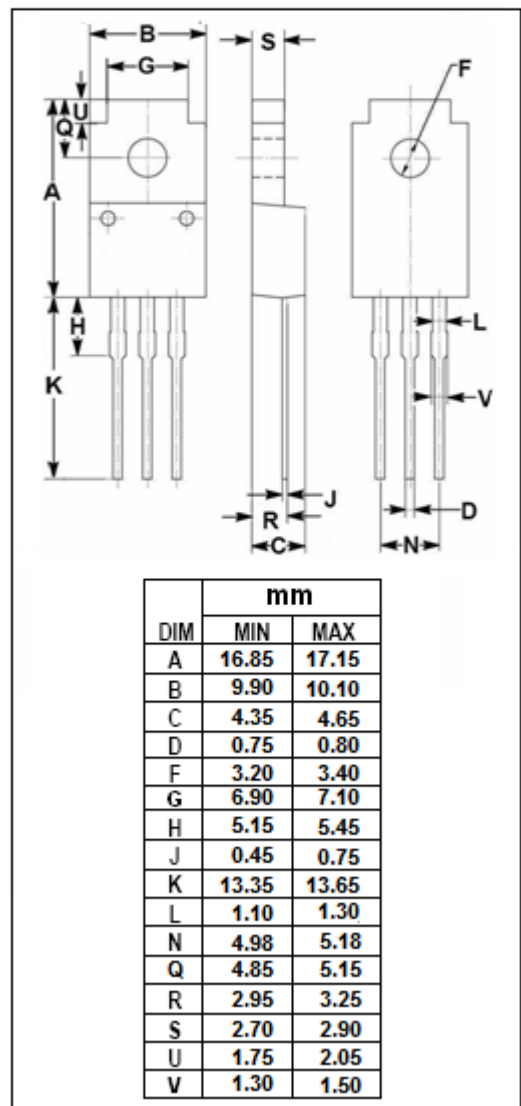
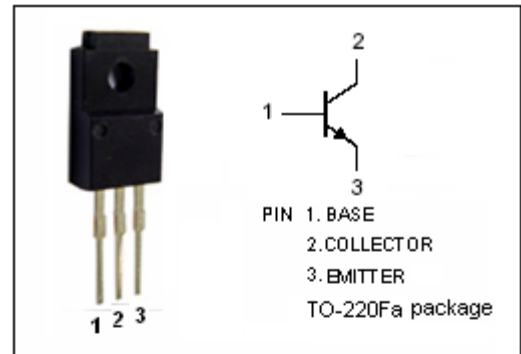
- Low Collector Saturation Voltage  
:  $V_{CE(sat)} = 1.0V(\text{Max.}) @ I_C = 4A$
- High Collector Power Dissipation
- Good Linearity of  $h_{FE}$
- Wide Area of Safe Operation

**APPLICATIONS**

- Designed for low frequency power amplifier applications.

**ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ C$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	100	V
$V_{CEO}$	Collector-Emitter Voltage	80	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	7	A
$I_{CM}$	Collector Current-Pulse	10	A
$P_C$	Collector Power Dissipation @ $T_a=25^\circ C$	1.5	W
	Collector Power Dissipation @ $T_C=25^\circ C$	30	
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ C$



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## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=1\text{mA}; I_B=0$	80			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=50\mu\text{A}; I_E=0$	100			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=50\mu\text{A}; I_C=0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=4\text{A}; I_B=0.4\text{A}$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=4\text{A}; I_B=0.4\text{A}$			1.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=100\text{V}; I_E=0$			10	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=4\text{V}; I_C=0$			10	$\mu\text{A}$
$h_{FE}$	DC Current Gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	60		320	
$f_T$	Current-Gain—Bandwidth Product	$I_E=-0.5\text{A}; V_{CE}=5\text{V}$		5		MHz
$C_{OB}$	Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f_{test}=1.0\text{MHz}$		150		pF

◆  $h_{FE}$  Classifications

D	E	F
60-120	100-200	160-320