

isc Silicon NPN Power Transistor
2SD1133
DESCRIPTION

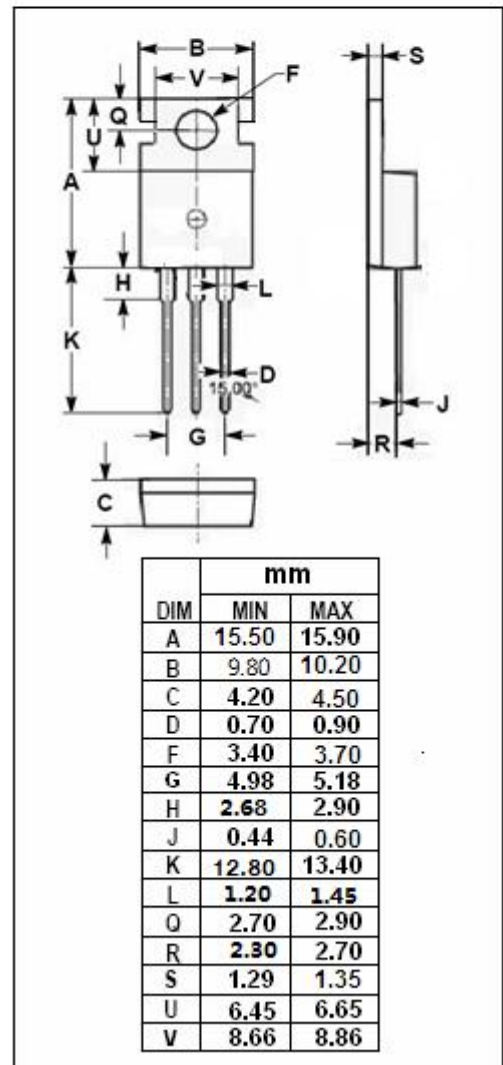
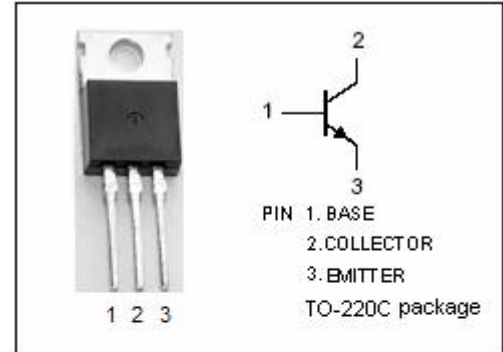
- Collector Current: $I_C = 4A$
- Low Collector Saturation Voltage
: $V_{CE(sat)} = 1.0V(Max) @ I_C = 2A$
- High Collector Power Dissipation
- Complement to Type 2SB857
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

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	70	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	4	A
I_{CM}	Collector Current-Peak	8	A
P_C	Total Power Dissipation @ $T_C = 25^\circ C$	40	W
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-45~150	$^\circ C$



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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	$I_C=10\text{mA}$; $R_{BE}=\infty$	50			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=10\ \mu\text{A}$; $I_E=0$	70			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=10\ \mu\text{A}$; $I_C=0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=2\text{A}$; $I_B=0.2\text{A}$			1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=1\text{A}$; $V_{CE}=4\text{V}$			1.0	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=50\text{V}$; $I_E=0$			1	μA
h_{FE-1}	DC Current Gain	$I_C=1\text{A}$; $V_{CE}=4\text{V}$	60		320	
h_{FE-2}	DC Current Gain	$I_C=0.1\text{A}$; $V_{CE}=4\text{V}$	35			
f_T	Current-Gain—Bandwidth Product	$I_C=0.5\text{A}$; $V_{CE}=4\text{V}$		7		MHz

◆ h_{FE-1} Classifications

B	C	D
60-120	100-200	160-320

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