

**Silicon NPN Power Transistor**

**BD633**

**DESCRIPTION**

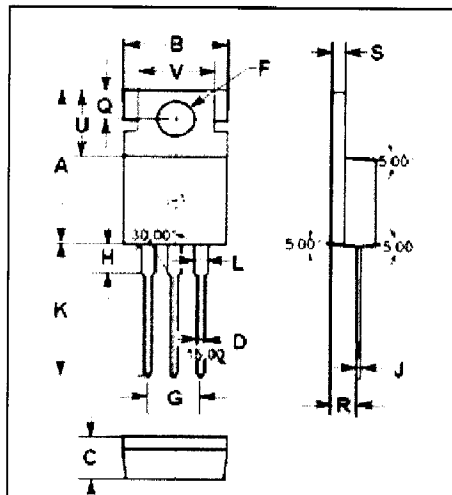
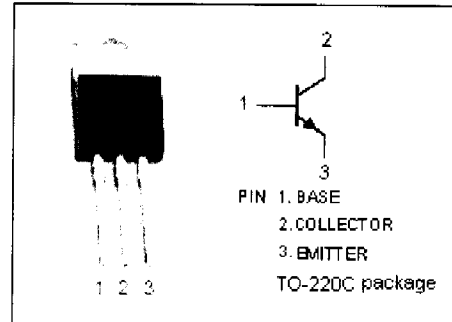
- DC Current Gain -  
:  $h_{FE} = 40(\text{Min.}) @ I_C = 25\text{mA}$
- Collector-Emitter Breakdown Voltage -  
:  $V_{(BR)CEO} = 45\text{V}(\text{Min.})$
- Complement to Type BD634

**APPLICATIONS**

- Designed for amplifier and switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	45	V
$V_{CEO}$	Collector-Emitter Voltage	45	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	2	A
$I_{CM}$	Collector Current-Peak	5	A
$I_B$	Base Current-Continuous	0.3	A
$P_C$	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	2	W
	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	30	
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



DIM	mm	
	MIN	MAX
A	15.70	15.90
B	9.90	10.10
C	4.20	4.40
D	0.70	0.90
F	3.40	3.60
G	4.98	5.18
H	2.70	2.90
J	0.44	0.46
K	13.20	13.40
L	1.10	1.30
Q	2.70	2.90
R	2.50	2.70
S	1.29	1.31
U	6.45	6.65
V	8.66	8.86

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## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=30\text{mA}; I_B=0$	45		V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=0.1\text{mA}; I_E=0$	45		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=1\text{mA}; I_C=0$	5		V
$V_{CE(sat)}$	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
$I_{CES}$	Collector Cutoff Current	$V_{CE}=45\text{V}; V_{BE}=0$		0.2	mA
$h_{FE-1}$	DC Current Gain	$I_C=25\text{mA}; V_{CE}=2\text{V}$	40		
$h_{FE-2}$	DC Current Gain	$I_C=1\text{A}; V_{CE}=2\text{V}$	25		