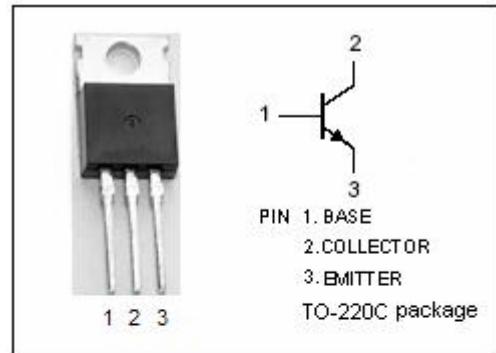


isc Silicon NPN Power Transistor
2N5297
DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CE(SUS)} = 60V(\text{Min})$
- Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 1.0V(\text{Max}) @ I_C = 1.5A, I_B = 0.15A$
- Wide Area of Safe Operation
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation


APPLICATIONS

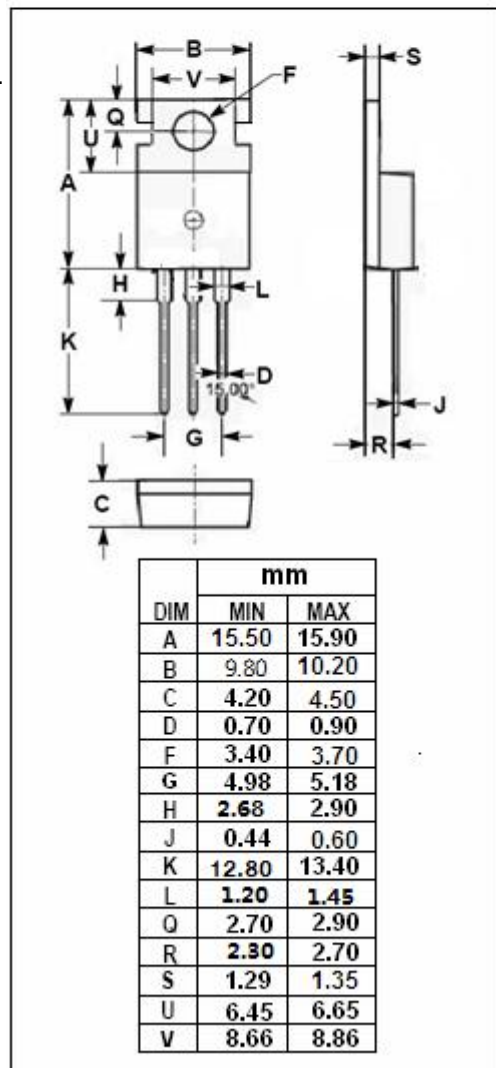
- Designed for medium power switching amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	4.0	A
I_B	Base Current	2.0	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	36	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	3.47	$^\circ\text{C/W}$



isc Silicon NPN Power Transistor**2N5297****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=30\text{mA}; I_B=0$	60		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=1\text{A}; I_B=0.1\text{A}$		1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=1\text{A}; V_{CE}=4\text{V}$		1.3	V
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$		1.0	mA
h_{FE}	DC Current Gain	$I_C=1.5\text{A}; V_{CE}=4\text{V}$	20	80	
f_T	Current-Gain—Bandwidth Product	$I_C=0.2\text{A}; V_{CE}=4\text{V}$	0.8		MHz

Switching Times

t_{on}	Turn-On Time	$I_C=1\text{A}; I_B=0.1\text{A}; V_{CC}=30\text{V}$		5.0	μs
t_{off}	Turn-Off Time			15	μs

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