

isc Silicon NPN Power Transistors

2N6771

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 300V(\text{Min})$
- High Switching Speed
- Low Saturation Voltage
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

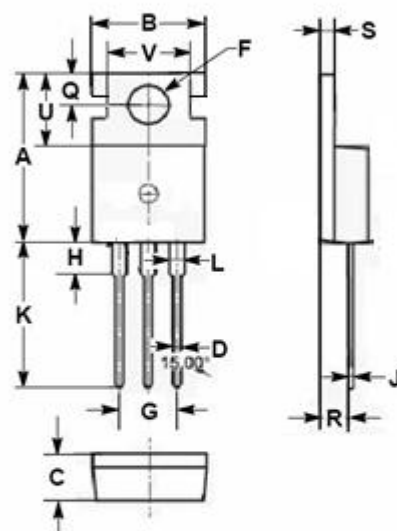
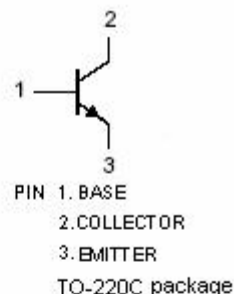
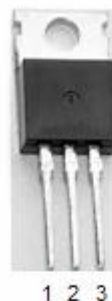
- Designed for use in off-line power supplies and is also well suited for use in a wide range of inverter or converter circuits and pulse-width-modulated regulators and switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	450	V
V_{CEO}	Collector-Emitter Voltage	300	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	1	A
I_{CM}	Collector Current-Peak	3	A
P_C	Collector Power Dissipation@ $T_c=25^\circ\text{C}$	40	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	3.125	$^\circ\text{C/W}$



DIM	mm	
	MIN	MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
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	TYP.	MAX	UNIT
$V_{CEQ(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=50\text{mA}$; $I_B=0$	300			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=1\text{mA}$; $I_C=0$	6			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=1\text{A}$; $I_B=0.2\text{A}$ $I_C=1\text{A}$; $I_B=0.2\text{A}$, $T_C=125^{\circ}\text{C}$			1.0 2.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=1\text{A}$; $I_B=0.2\text{A}$			1.6	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=1\text{A}$; $V_{CE}=3\text{V}$			1.5	V
I_{EBO}	Emitter Cutoff Current	$V_{EB}=6\text{V}$; $I_C=0$			100	μA
I_{CBO}	Collector Cutoff Current	$V_{CB}=450\text{V}$; $I_E=0$			100	μA
h_{FE}	DC Current Gain	$I_C=5\text{A}$; $V_{CE}=3\text{V}$	7		35	
C_{OB}	Output Capacitance	$I_E=0$; $V_{CB}=10\text{V}$; $f_{\text{test}}=1\text{MHz}$	50			pF
f_T	Current-Gain—Bandwidth Product	$I_C=0.5\text{A}$; $V_{CE}=10\text{V}$	10			MHz

Switching Times

t_d	Delay Time	$I_C=1\text{A}$; $I_{B1}=-I_{B2}=0.2\text{A}$			0.1	μs
t_r	Rise Time				0.5	μs
t_{stg}	Storage Time				2.5	μs
t_f	Fall Time				0.4	μs

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