

Silicon NPN Power Transistors

2N6771/6772/6773

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 300V(\text{Min})$ - 2N6771
= $350V(\text{Min})$ - 2N6772
= $400V(\text{Min})$ - 2N6773
- High Switching Speed
- Low Saturation Voltage

APPLICATIONS

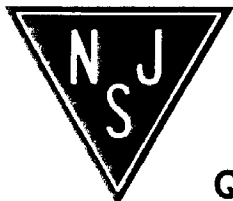
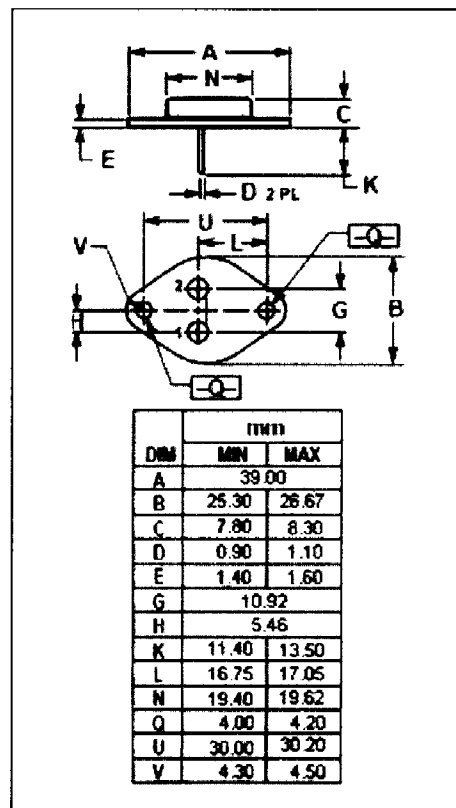
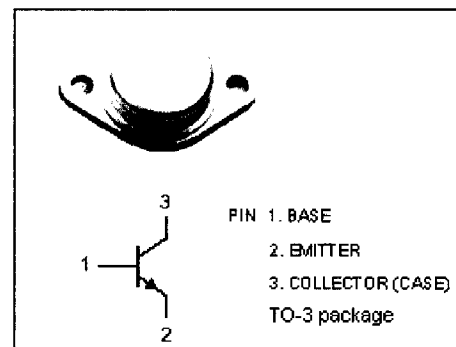
- Designed for use in off-line power supplies and is also well suited for use in a wide range of inverter or converter circuits and pulse-width-modulated regulators.

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

SYMBOL	PARAMETER	VALUE	UNIT	
V_{CEV}	Collector-Emitter Voltage $V_{BE} = -1.5V$	2N6771	450	V
		2N6772	550	
		2N6773	650	
$V_{CEO(SUS)}$	Collector-Emitter Voltage	2N6771	300	V
		2N6772	350	
		2N6773	400	
V_{EBO}	Emitter-Base Voltage	8	V	
I_C	Collector Current-Continuous	8	A	
I_{CM}	Collector Current-Peak	10	A	
I_B	Base Current-Continuous	4	A	
P_C	Collector Power Dissipation@ $T_C=25^\circ\text{C}$	150	W	
T_J	Junction Temperature	200	$^\circ\text{C}$	
T_{stg}	Storage Temperature	-65~200	$^\circ\text{C}$	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.17	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT	
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	2N6771	$I_C=200\text{mA}; I_B=0$	300			V	
		2N6772		350				
		2N6773		400				
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage		$I_C=5\text{A}; I_B=1\text{A}$ $I_C=5\text{A}; I_B=1\text{A}, T_C=125^\circ\text{C}$			1.0 2.0	V	
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage		$I_C=8\text{A}; I_B=4\text{A}$			2.0	V	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage		$I_C=5\text{A}; I_B=1\text{A}$			1.6	V	
I_{CEV}	Collector Cutoff Current	2N6771	$V_{CE}=450\text{V}; V_{BE}=-1.5\text{V}$ $V_{CE}=450\text{V}; V_{BE}=-1.5\text{V}, T_C=125^\circ\text{C}$			0.1 1.0	mA	
		2N6772		$V_{CE}=550\text{V}; V_{BE}=-1.5\text{V}$ $V_{CE}=550\text{V}; V_{BE}=-1.5\text{V}, T_C=125^\circ\text{C}$				0.1 1.0
		2N6773		$V_{CE}=650\text{V}; V_{BE}=-1.5\text{V}$ $V_{CE}=650\text{V}; V_{BE}=-1.5\text{V}, T_C=125^\circ\text{C}$				0.1 1.0
I_{EBO}	Emitter Cutoff Current		$V_{EB}=8\text{V}; I_C=0$			2.0	mA	
h_{FE}	DC Current Gain		$I_C=5\text{A}; V_{CE}=3\text{V}$	10		40		
C_{OB}	Output Capacitance		$I_E=0; V_{CB}=10\text{V}; f_{test}=1\text{MHz}$	50		300	pF	
f_T	Current-Gain—Bandwidth Product		$I_C=0.2\text{A}; V_{CE}=10\text{V}$	15		60	MHz	

Switching Times

t_d	Delay Time	$I_C=5\text{A}; I_{B1}=-I_{B2}=1\text{A}$			0.1	μs
t_r	Rise Time				0.5	μs
t_{stg}	Storage Time				2.5	μs
t_f	Fall Time				0.4	μs