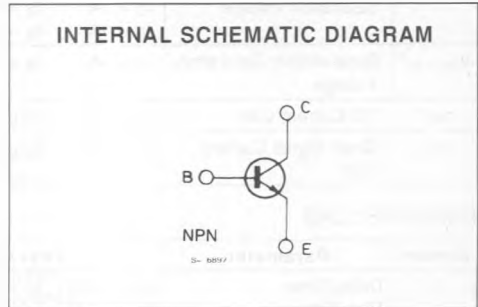
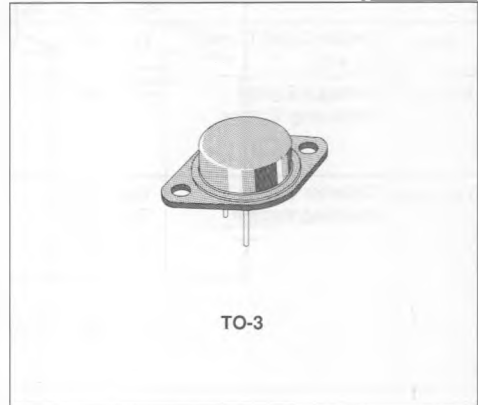




NPN HIGH VOLTAGE POWER TRANSISTORS

- SWITCHING REGULATORS
- INVERTERS
- SOLENOID AND RELAY DRIVERS
- MOTOR CONTROLS
- DEFLECTION CIRCUITS



DESCRIPTION

High voltage, high speed switching power transistors suited for use on the 220 and 380V mains.

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	2N6671	2N6672	2N6673	Unit
V_{CEV}	Collector-emitter Voltage ($V_{BE} = -1.5V$)	450	550	650	V
V_{CEX}	Collector-emitter Voltage	350	400	450	V
V_{CEO}	Collector-emitter Voltage ($I_B = 0$)	300	350	400	V
V_{EBO}	Emitter-base Voltage ($I_C = 0$)	8			V
I_C	Collector Current	8			A
I_{CM}	Collector Peak Current	10			A
I_B	Base Current	4			A
P_{Tot}	Total Dissipation at $T_c < 25^\circ C$	150			W
T_{stg}	Storage Temperature	- 65 to 200			$^\circ C$
T_j	Max. Operating Junction Temperature	200			$^\circ C$

THERMAL DATA

$R_{thj-case}$	Thermal Resistance Junction-case	Max	1.17	°C/W
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ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
I_{CEV}	Collector Cutoff Current	$V_{CE} = V_{CEV}$ $V_{CE} = V_{CEV}$	$V_{BE} = -1.5V$ $V_{BE} = -1.5V$			0.1 1	mA mA
I_{EBO}	Emitter Cutoff Current ($I_C = 0$)	$V_{EB} = 8V$				2	mA
$V_{CEO(sus)^*}$	Collector Emitter Sustaining Voltage	$I_C = 0.2A$	$L_C = 25mH$ for 2N6671 for 2N6672 for 2N6673	300 350 400			V V V
$V_{CEX(clamp)}$	Collector Emitter Clamped Voltage	$V_{BB} = -5V$ $R_{BB} = 5\Omega$ $I_C = 5A$	$L_C = 170\mu H$ $I_{B1} = -I_{B2} = 1A$ for 2N6671 for 2N6672 for 2N6673	350 400 450			V V V
		$I_C = 8A$	$I_{B1} = -I_{B2} = 3A$ for 2N6671 for 2N6672 for 2N6673	200 250 300			V V V
$V_{CE(sat)^*}$	Collector-emitter Saturation Voltage	$I_C = 5A$ $I_C = 5A$ $I_C = 8A$	$I_B = 1A$ $I_B = 1A$ $I_B = 4A$			1 2 2	V V V
			$T_C = 100^{\circ}C$				
$V_{BE(sat)^*}$	Base-emitter Saturation Voltage	$I_C = 5A$	$I_B = 1A$			1.6	V
h_{FE}^*	DC Current Gain	$I_C = 5A$	$V_{CE} = 3V$	10		40	
h_{re}	Small Signal Current Gain	$I_C = 0.2A$	$V_{CE} = 10V$ $f = 1MHz$	3		12	

RESISTIVE LOAD

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
t_d	Delay Time	$V_{CC} = 125V$	$I_C = 5A$ $t_p = 20\mu s$			0.1	μs
t_r	Rise Time	$V_{BB} = -6V$	$I_{B1} = 1A$			0.5	μs
t_r	Rise Time	$V_{CC} = 125V$	$I_C = 5A$ $t_p = 20\mu s$			0.8	μs
		$V_{BB} = -6V$	$I_{B1} = 1A$ $T_C = 125^{\circ}C$				
t_s	Storage Time	$V_{CC} = 125V$	$I_C = 5A$ $t_p = 20\mu s$			2.5	μs
t_f	Fall Time	$V_{BB} = -6V$	$I_{B1} = -I_{B2} = 1A$			0.4	μs
t_s	Storage Time	$V_{CC} = 125V$	$I_C = 5A$ $t_p = 20\mu s$			4	μs
t_f	Fall Time	$V_{BB} = -6V$	$I_{B1} = -I_{B2} = 1A$			0.8	μs
		$T_C = 100^{\circ}C$					

Figure 1 : Test Circuit RBSOA.

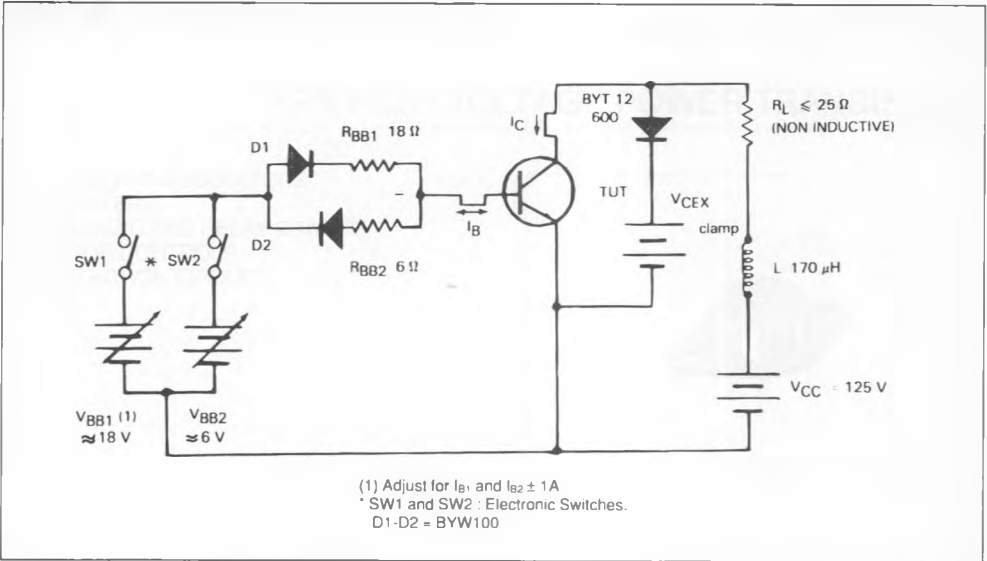


Figure 2 : Maximum Operating Conditions for Switching between Saturation and Cut-off.

