



**NPN POWER TRANSISTORS**  
20 & 30 AMP

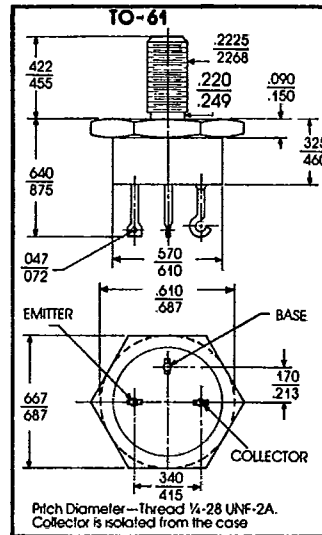
2N5329  
2N5330

**GEOMETRY 511**

- Ic to 30 Amp
- Fast Switching

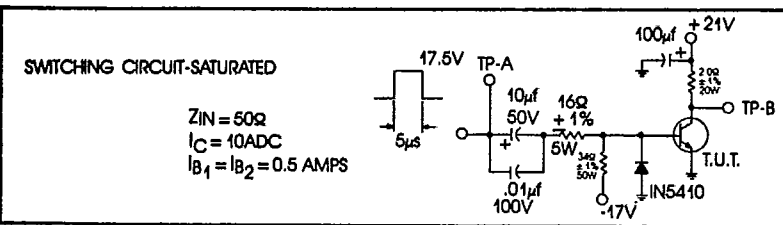
**MAXIMUM RATINGS**

PARAMETER	SYMBOL	2N5329	2N5330	UNIT
Collector-Emitter Voltage	V <sub>CEO</sub>	90	90	V
Collector-Base Voltage	V <sub>CB0</sub>	150	150	V
Emitter-Base Voltage	V <sub>EB0</sub>	8	8	V
Collector Current-Continuous		20	30	A
-Peak*		30	40	A
Base Current-Continuous		5	5	A
-Peak*		8	8	A
Emitter Current-Continuous		20	30	A
-Peak*		30	40	A
Power Dissipation @ TC < 100°C		65	80	W
Linear Derating Factor		650	800	mW/°C
Peak Power Dissipation @ TC < 25°C		1	1	KW
300 μsec PW @ 60 PPS				
Linear Derating Factor		5.7	5.7	W/°C
Storage and Operating Junction Temperature Range		-65°C to +200°C		
Lead Temp. (1/16" ± 1/32" from case)		230°C for 10 seconds		



**ELECTRICAL CHARACTERISTICS AT 25°C CASE TEMPERATURE**  
(unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	2N5329		2N5330		UNIT
			MIN.	MAX.	MIN.	MAX.	
Collector Cutoff Current	I <sub>CEV</sub>	V <sub>CE</sub> = 150V, V <sub>BE</sub> = -.5V, T <sub>C</sub> = 150°C		50		50	mA
		V <sub>CE</sub> = 150V, V <sub>BE</sub> = -.5V-reverse bias		5		10	mA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> = 8.0V		5		5	mA
Collector-Emitter Sustain Voltage	V <sub>CEO(sus)</sub>	I <sub>B</sub> = 0, I <sub>C</sub> = 100mA	90		90		V
*DC Forward Current Transfer Ratio	h <sub>FE</sub>	V <sub>CE</sub> = 2V, I <sub>C</sub> = 10A	40	120	40	120	
		V <sub>CE</sub> = 3V, I <sub>C</sub> = 20A	10				
		V <sub>CE</sub> = 3V, I <sub>C</sub> = 30A			10	50	
*Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 10A, I <sub>B</sub> = .5A				.6	V
		I <sub>C</sub> = 20A, I <sub>B</sub> = 2A		1.8			V
		I <sub>C</sub> = 30A, I <sub>B</sub> = 3A				1.8	V
*Base Emitter Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 10A, I <sub>B</sub> = .3A				1.3	V
		I <sub>C</sub> = 20A, I <sub>B</sub> = 2A		1.7			V
		I <sub>C</sub> = 30A, I <sub>B</sub> = 3A				1.8	V
Turn-On Time	t <sub>ON</sub>	See Diagram Below.		.350		.350	μsec
Turn-Off Time	t <sub>OFF</sub>			1.1		1.250	μsec
High Frequency Beta	h <sub>FE</sub>	V <sub>CE</sub> = 10V, I <sub>C</sub> = 3A, f = 10MHz	8		8		



\* Pulsed.  
Pulse width = 300 μsec. 2% duty cycle.