

# PNP 3 AMP POWER TRANSISTORS

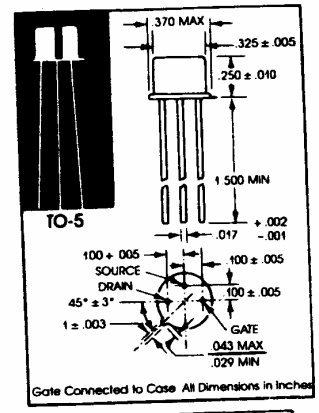
**2N3867  
2N3868  
2N6303**

## GEOMETRY 505

- HIGH SPEED
- VCE(sus) to 80V
- HIGH FT

### MAXIMUM RATINGS

PARAMETER	SYMBOL	2N3867	2N3868	2N6303	UNIT
Collector Emitter Voltage	VCEO	40	60	80	V
Collector Base Voltage	VCBO	45	65	80	V
Emitter Base Voltage	VEBO	4	4	4	V
DC Collector Current	IC	3	3	3	A
Power Dissipation @ TA<25°C	PD	1	1	1	W
Linear Derating Factor		5.71	5.71	5.71	mW/°C
Power Dissipation @ TC<25°C	PD	6	6	6	W
Linear Derating Factor		34.3	34.3	34.3	mW/°C
Storage Temperature	Tstg	-65°C to 200°C			
Lead Temperature (1/16" ± 1/32" from case)		+ 230°C for 60 seconds			



### ELECTRICAL CHARACTERISTICS AT 25°C FREE-AIR TEMPERATURE

PARAMETER	SYMBOL	TEST CONDITIONS	2N3867		2N3868		2N6303		UNIT
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	
Collector Reverse Current	ICEX	VCE = -40V, VEB = -2V (2N3867) VCE = -60V, VEB = -2V (2N3868) VCE = -80V, VEB = -2V (2N6303)		1		1		1	μA
Base Current	IBL	VCE = -40V, VEB = -2V (2N3867) VCE = -60V, VEB = -2V (2N3868)		1		1			μA
Collector-Base Breakdown Voltage*	BVCBO	IC = 100μA, IE = 0	45		65		80		V
Emitter-Base Breakdown Voltage*	BVEBO	IE = 100μA, IC = 0	4		4		4		V
Collector Emitter Breakdown Voltage*	BVCEO	IC = 20mA, IB = 0	40	200	60	30	150	30	150
Static Forward Current Transfer Ratio*	hFE	VCE = 2V, IC = 1.5A	40		30		30		
Static Forward Current Transfer Ratio*	hFE	IC = 500mA, VCE = 1V	50		35		35		
Static Forward Current Transfer Ratio*	hFE	IC = 2.5A, VCE = 3V	25		20		20		V
Static Forward Current Transfer Ratio*	hFE	IC = 3.0A, VCE = 5V	20		20		20		V
Collector Emitter Saturation*	VCE(sat)	IC = 1.5A, IB = 150mA		.75		.75		.75	
Collector Emitter Saturation*	VCE(sat)	IC = 500mA, IB = 50mA		0.5		0.5		0.5	
Collector Emitter Saturation*	VCE(sat)	IC = 2.5A, IB = 250mA		1.5		1.5		1.5	
Base Emitter Voltage*	VBE(sat)	IC = 1.5A, IB = 150mA	0.9	1.4	0.9	1.4	0.9	1.4	V
Base Emitter Saturation*	VBE(sat)	IC = 500mA, IB = 50mA		1.0		1.0		1.0	V
Base Emitter Saturation*	VBE(sat)	IC = 2.5A, IB = 250mA		2.0		2.0		2.0	V
Collector-Base Cutoff Current TA = 150°C	ICBO	VCB = 40V, IE = 0 (2N3867) VCB = 60V, IE = 0 (2N3868) VCB = 80V, IE = 0 (2N6303)		150		150		150	μA
Turn-On Delay Time	td	VCC = 30V, ICS = 1.5A, IB1 = 150mA		35		35		35	nsec
Rise Time	tr	VCC = 30V, ICS = 1.5A, IB1 = 150mA		60		60		65	nsec
Storage Time	ts	VCC = 30V, ICS = 1.5A, IB1 = IB2 = 150mA		500		500		500	nsec
Fall Time	tf	VCC = 30V, ICS = 1.5A, IB1 = IB2 = 150mA		100		100		100	nsec
Output Capacitance	Cobo	IE = 0, VCB = 10V, f = 100KHz		120		120		120	pf
High Frequency Beta	hfe	VCE = 5V, IC = 100mA, f = 20MHz	3		3		3		
Input Capacitance	Cibo	VEB = 3V, IC = 0, f = 100KHz		1000		1000		1000	pf

\* Pulsed. Pulse width = 300 μsec. Duty Cycle < 2%

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