PNP 3 AMP
POWER TRANSISTORS

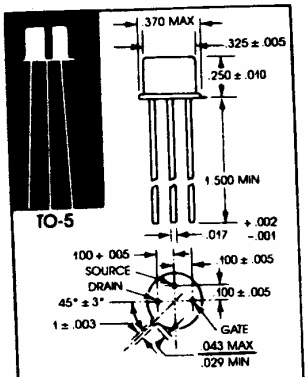
2N3867
2N3868
2N6303

GEOMETRY 505

- HIGH SPEED
- VCEO(sus) to 80V
- HIGH fT

MAXIMUM RATINGS

PARAMETER	SYMBOL	2N3867	2N3868	2N6303	UNIT
Collector Emitter Voltage	V_{CEO}	40	60	80	V
Collector Base Voltage	V_{CBO}	45	65	80	V
Emitter Base Voltage	V_{EBO}	4	4	4	V
DC Collector Current	I_C	3	3	3	A
Power Dissipation @TA≤25°C	P_D	1	1	1	W
Linear Derating Factor		5.71	5.71	5.71	mW/°C
Power Dissipation @TC≤25°C	P_D	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			



TO-5

Gate Connected to Case All Dimensions in Inches

ELECTRICAL CHARACTERISTICS AT 25°C FREE-AIR TEMPERATURE

PARAMETER	SYMBOL	TEST CONDITIONS	2N3867 MIN.	2N3867 MAX.	2N3868 MIN.	2N3868 MAX.	2N6303 MIN.	2N6303 MAX.	UNIT
Collector Reverse Current	I_{CEX}	V_{CE} = −40V, V_{EB} = −2V (2N3867)		1					μA
		V_{CE} = −60V, V_{EB} = −2V (2N3868)				1			
		V_{CE} = −80V, V_{EB} = −2V (2N6303)						1	
Base Current	I_{BL}	V_{CE} = −40V, V_{EB} = −2V (2N3867)		1					μA
		V_{CE} = −60V, V_{EB} = −2V (2N3868)				1			
Collector-Base Breakdown Voltage*	BV_{CBO}	I_C = 100μAdc, I_E = 0	45		65		80		V
Emitter-Base Breakdown Voltage*	BV_{EBO}	I_E = 100μA, I_C = 0	4		4		4		V
Collector Emitter Breakdown Voltage*	BV_{CEO}	I_C = 20mA, I_B = 0	40		60		80		V
Static Forward Current Transfer Ratio*	h_{FE}	V_{CE} = 2V, I_C = 1.5A	40	200	30	150	30	150	
Static Forward Current Transfer Ratio*	h_{FE}	I_C = 500mA, V_{CE} = 1V	50		35		35		
		I_C = 2.5A, V_{CE} = 3V	25		20		20		
		I_C = 3.0A, V_{CE} = 5V	20		20		20		V
Collector Emitter Saturation*	$V_{CE(sat)}$	I_C = 1.5A, I_B = 150mA		.75		.75		.75	V
		I_C = 500mA, I_B = 50mA		0.5		0.5		0.5	
		I_C = 2.5A, I_B = 250mA		1.5		1.5		1.5	
Base Emitter Voltage*	$V_{BE(sat)}$	I_C = 1.5A, I_B = 150mA	0.9	1.4	0.9	1.4	0.9	1.4	V
Base Emitter Saturation*	$V_{BE(sat)}$	I_C = 500mA, I_B = 50mA		1.0		1.0		1.0	V
		I_C = 2.5A, I_B = 250mA		2.0		2.0		2.0	
Collector-Base Cutoff Current TA = 150°C	I_{CBO}	V_{CB} = 40V, I_E = 0 (2N3867)		150					μA
		V_{CB} = 60V, I_E = 0 (2N3868)				150			
		V_{CB} = 80V, I_E = 0 (2N6303)						150	
Turn-On Delay Time	td	V_{CC} = 30V, I_{CS} = 1.5A, I_{B1} = 150mA		35		35		35	nsec
Rise Time	tr	V_{CC} = 30V, I_{CS} = 1.5A, I_{B1} = 150mA		60		60		65	nsec
Storage Time	ts	V_{CC} = 30V, I_{CS} = 1.5A, I_{B1} = I_{B2} = 150mA		500		500		500	nsec
Fall Time	tf	V_{CC} = 30V, I_{CS} = 1.5A, I_{B1} = I_{B2} = 150mA		100		100		100	nsec
Output Capacitance	Cobo	I_E = 0, V_{CB} = 10V, f = 100KHz		120		120		120	pf
High Frequency Beta	hfe	V_{CE} = 5V, I_C = 100mA, f = 20MHz	3		3		3		
Input Capacitance	Cibo	V_{EB} = 3V, I_C = 0, f = 100KHz		1000		1000		1000	pf

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

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