

INTERIM BULLETIN

Subject to Revision Without Notice

-July 15, 1971



**POWER TRANSISTOR
ENGINEERING BULLETIN**

**TYPE P 1001 thru P 1017, 2 AMP NPN
SILICON PLANAR POWER TRANSISTORS**

**TYPE PG1001 thru PG1017, 2 AMP NPN
SILICON PLANAR POWER TRANSISTORS**

- TO-46
- 90 MHz (typical)
- 4 WATTS @ 100°C
- PREMIUM GRADE

MAXIMUM RATINGS @ 25°C AMBIENT (Unless otherwise noted.)

RATING	PG1001	PG1002	PG1003	2N4862	PG1004	PG1005	UNIT
	PG1006	PG1007	PG1008	PG1009	PG1010	PG1011	
	PG1012	PG1013	PG1014	PG1015	PG1016	PG1017	
Collector-Base Voltage	80	100	120	140	150	170	Volts
Collector-Emitter Voltage	60	80	100	120	140	160	Volts
Emitter-Base Voltage	8	8	8	8	8	8	Volts
Collector Current	2	2	2	2	2	2	Amps
Base Current	0.5	0.5	0.5	0.5	0.5	0.5	Amps
Storage Temperature			-65 to 200				°C
Operating Junction Temp.			-65 to 200				°C
Dissipation @ 100°C Case	4	4	4	4	4	4	Watts
Linear Derating Factor	40	40	40	40	40	40	mW/°C

ELECTRICAL CHARACTERISTICS @ 25°C CASE TEMPERATURE (Unless otherwise noted.)

SYMBOL	CONDITIONS	TYPES	LIMIT		UNIT
			MIN.	MAX.	
I_{CEX}	$V_{CE} = 60V, V_{BE} = -0.5V, T_C = 150°C$	All		10	μA
I_{CEX}	$V_{CE} = \text{MAX RATING}, V_{BE} = -0.5V$	All		10	μA
I_{CBO}	$V_{CB} = 60V, I_E = 0$	All		0.1	μA
I_{EBO}	$V_{EB} = 8V$	All		10	μA
$V_{CEO(sus)}^*$	$I_B = 0, I_C = 10mA$	All	Max. Rating		Volts
I_{CEO}	$I_B = 0, V_{CE} = 60V$	All		10	μA
h_{FE}^*	$I_C = 2A, V_{CE} = 5V$	PG1001 thru PG1005		15	

PIRGO ELECTRONICS INC.

A Sprague Electric Company Subsidiary

Pembroke Road, Concord, N.H. 03301

PG--1001-1X

ELECTRICAL CHARACTERISTICS @ 25°C (Continued)

SYMBOL	CONDITIONS	TYPES	LIMIT		UNIT	
			MIN.	MAX.		
h_{FE}^*	$I_C = 2A, V_{CE} = 5V$	PG1006	10			
		thru PG1011				
		PG1012	20			
	$I_C = 0.5A, V_{CE} = 5V$	thru PG1017				
		PG1001	50	150		
		thru PG1005				
		PG1006	30	90		
		thru PG1011				
		PG1012	100	300		
		thru PG1017				
$V_{CE(sat)}^*$	$I_C = 2A, I_B = 0.2A$	All		1.5	Volts	
	$I_C = 0.5A, I_B = 50mA$	All		0.2	Volts	
V_{BE}^*	$I_C = 0.5A, V_{CE} = 5V$	All		1.2	Volts	
$ h_{fe} $	$V_{CE} = 10V, I_C = 0.1A, f = 10MHz$	All	5			
h_{fe}	$V_{CE} = 5V, I_C = 50mA, f = 1 KHz$	PG1001	50			
		thru PG1005				
		PG1006	30			
		thru PG1011				
		PG1012	70			
C_{ob}	$V_{CB} = 10V, I_C = 0, f = 1 MHz$	thru PG1017				
		All		50	pf	

*Pulsed measurement: $PW \leq 330\mu sec; \leq 2\%$ duty cycle.

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