



**POWER TRANSISTOR
 ENGINEERING BULLETIN**

**TYPE PG1050 thru PG1066, 2 AMP NPN
 SILICON PLANAR POWER TRANSISTORS**

- TO-5
- 90 MHz (typical)
- 5 WATTS @ 100°C
- PREMIUM GRADE

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

RATING	PG1050	PG1051	PG1052	2N4863	PG1053	PG1054	PG1055	PG1056	PG1057	PG1058	PG1059	PG1060	PG1061	PG1062	PG1063	PG1064	PG1065	PG1066	UNIT
Collector-Base Voltage	80	100	120	140	150	170	60	80	100	120	140	160	8	8	8	8	8	8	Volts
Collector-Emitter Voltage	60	80	100	120	140	160	8	8	8	8	8	8	2	2	2	2	2	2	Volts
Emitter-Base Voltage	8	8	8	8	8	8	8	8	8	8	8	8	2	2	2	2	2	2	Volts
Collector Current	2	2	2	2	2	2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	Amps
Base Current	0.5	0.5	0.5	0.5	0.5	0.5	-65 to 200	-65 to 200	-65 to 200	-65 to 200	-65 to 200	-65 to 200	5	5	5	5	5	5	Amps
Storage Temperature													5	5	5	5	5	5	°C
Operating Junction Temp.													5	5	5	5	5	5	°C
Dissipation @ 100°C Case	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	Watts
Linear Derating Factor	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	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
$BV_{CEO(sus)*}$	$I_B = 0, I_C = 10mA$	All	Max. Rating		Volts
I_{CEO}	$I_B = 0, V_{CE} = 60V$	All		10	μA
h_{FE}^*	$I_C = 2A, V_{CE} = 5V$	PG1050 thru PG1054 PG1055 thru PG1060	15	10	

PG-1050-IX

PIRGO ELECTRONICS INC.

A Sprague Electric Company Subsidiary

Pembroke Road, Concord, N.H. 03301

**TYPE P 1050 thru P 1066, 2 AMP NPN
 SILICON PLANAR POWER TRANSISTORS**

**ENGINEERING
 BULLETIN
 31,515**

ELECTRICAL CHARACTERISTICS @ 15°C (Continued)

SYMBOL	CONDITIONS	TYPES	LIMIT		UNIT
			MIN.	MAX.	
h_{FE}^*	$I_C = 2A, V_{CE} = 5V$	PG1061 thru PG1066	20		
h_{FE}^*	$I_C = 0.5A, V_{CE} = 5V$	PG1050 thru PG1054 PG1055 thru PG1060 PG1061 thru PG1066	50 30 100	150 90 300	
$V_{CE(sat)}^*$	$I_C = 2A, I_B = 0.2A$	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}	$V_{CE} = 5V, I_C = 50mA, f = 1 KHz$	PG1050 thru PG1054 PG1055 thru PG1060 PG1061 thru PG1066	50 30 70		
C_{ob}	$V_{CB} = 10V, I_C = 0, f = 1 MHz$	All		50	pf

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

PG--1050-2X

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Litho in U.S. Amer.