

INTERIM BULLETIN

Subject to Revision Without Notice

-JUNE 22, 1970

POWER TRANSISTOR
ENGINEERING BULLETINTYPE PG1101 thru PG1117, 2 AMP NPN
SILICON PLANAR POWER TRANSISTORS

• TO-66 •

• 90 MHz (typical)

• 16 WATTS @ 100°C

• PREMIUM GRADE

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

RATING	PG1101 PG1106 PG1112	PG1102 PG1107 PG1113	PG1103 PG1108 PG1114	2N4864 PG1109 PG1115	PG1104 PG1110 PG1116	PG1105 PG1111 PG1117	UNIT
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	16	16	16	16	16	16	Watts
Linear Derating Factor	160	160	160	160	160	160	mW/°C

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

SYMBOL	CONDITIONS	TYPES	LIMIT		UNIT
			MIN.	MAX.	
I_{CEX}	$V_{CE} = 60V, V_{BE} = -0.5V, T_C = 150^\circ C$	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}^*	$I_C = 2A, V_{CE} = 5V$	PG1101 thru PG1105	15		

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PG-1117-1X

 ENGINEERING
BULLETIN
31,517

 TYPE P 1101 thru P 1117, 2 AMP NPN
SILICON PLANAR POWER TRANSISTORS

ELECTRICAL CHARACTERISTICS @ 25°C (Continued)

SYMBOL	CONDITIONS	TYPES	LIMIT		UNIT
			MIN.	MAX.	
h_{FE}^*	$I_C = 2A, V_{CE} = 5V$	PG1106 thru PG1111 PG1112	10		
		thru PG1117	20		
h_{FE}^*	$I_C = 0.5A, V_{CE} = 5V$	PG1101	50	150	
		thru PG1105 PG1106	30	90	
		thru PG1111 PG1112	100	300	
		thru PG1117			
$V_{CE(sat)}^*$	$I_C = 2A, I_B = 0.2A$	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}	$V_{CE} = 5V, I_C = 50mA, f = 1 KHz$	PG1101 thru PG1105 PG1106	50		
		thru PG1111 PG1112	30		
		thru PG1117	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.

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PG-1117-2X