

INTERIM BULLETIN

Subject to Revision Without Notice

-July 15, 1971

POWER TRANSISTOR
ENGINEERING BULLETINTYPE PG1157 thru PG1165, 5 AMP NPN
SILICON PLANAR POWER TRANSISTORS

• TO-5

• 80 MHz (typical)

• 5 WATTS @ 100°C

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

RATING	PG1157	PG1158	PG1159	UNIT
	PG1160	PG1161	PG1162	
	PG1163	PG1164	PG1165	
Collector-Base Voltage	80	100	120	Volts
Emitter-Base Voltage	6	6	6	Volts
Collector-Emitter Voltage	60	80	100	Volts
Collector Current	5	5	5	Amps
Base Current	0.5	0.5	0.5	Amps
Storage Temperature		-65 to 200		°C
Operating Junction Temperature		-65 to 200		°C
Dissipation @ 100°C Case	5	5	5	Watts
Dissipation @ $T_A = 25^\circ\text{C}$	1.25	1.25	1.25	Watts

ELECTRICAL CHARACTERISTICS @ 25°C Case Temp. (Unless otherwise noted)

SYMBOL	CONDITIONS	TYPES	LIMIT		UNIT
			MIN.	MAX.	
BV_{CBO}	$I_C = 10\mu\text{A}$	PG1157	80		Volts
		PG1160			
		PG1163			
		PG1158	100		Volts
		PG1161			
		PG1164			
		PG1159	120		Volts
BV_{EBO}	$I_E = 10\mu\text{A}$	PG1162			
		PG1165			
$BV_{CEO(sus)}^*$	$I_B = 0, I_C = 100\text{mA}$	All	6		Volts
		PG1157	60		Volts
		PG1160			
		PG1163			
		PG1158	80		Volts
		PG1161			
		PG1164			

PIRGO ELECTRONICS INC.

A Sprague Electric Company Subsidiary

Pembroke Road, Concord, NH 03301

PG--1157-1X

TYPE P 1157 thru P 1165, 5 AMP NPN
SILICON PLANAR POWER TRANSISTORSENGINEERING
BULLETIN
31,520

ELECTRICAL CHARACTERISTICS @ 25°C

SYMBOL	CONDITIONS	TYPES	LIMIT		UNIT
			MIN.	MAX.	
$V_{CE(sus)}^*$	$I_B = 0, I_C = 100\text{mA}$	PG1159 PG1162 PG1165	100		Volts
h_{FE}^*	$V_{CE} = 2\text{V}, I_C = 1\text{A}$	PG1157 thru PG1159 PG1160 thru PG1162 PG1163 thru PG1165	20 40 100	60 120 300	
$V_{CE(sat)}^*$	$I_C = 1\text{A}, I_B = 0.1\text{A}$	All		0.7	Volts
V_{BE}^*	$I_C = 1\text{A}, I_B = 0.1\text{A}$	All		2.5	Volts
I_{CBO}	$V_{CB} = 50\text{V}, I_E = 0$	All		10	μA
I_{CEO}	$V_{CE} = 30\text{V}$	All		100	μA
I_{EBO}	$V_{EB} = 6\text{V}$	All		10	μA
I_{CEX}	$V_{CE} = \text{Rated } BV_{CBO}, V_{BE} = -0.5\text{V}$	All		10	μA
	$V_{CE} = 50\text{V}, V_{BE} = -0.5\text{V}, T_C = 150^\circ\text{C}$	All		50	μA
$ h_{fe} $	$V_{CE} = 10\text{V}, I_C = 0.2\text{A}, f = 10\text{ MHz}$	All			

*Pulse Test: PW = 300 μs ; 2% duty cycle.

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PG-1157-2X