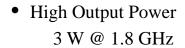
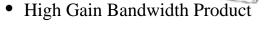
BIPOLARICS, INC. Part Number BPT1819E03

NPN SILICON MICROWAVE POWER TRANSISTORS

PRODUCT DATA SHEET

FEATURES:





$$f_t = 6.0 \text{ GHz typ } @ I_C = 480 \text{ mA}$$

• High Gain

$$G_{PE} = 10.0 \text{ dB} @ 1.8 \text{ GHz}$$

- Gold Metallization System
- High thermal efficiency BeO 6 Lead Flange package (package 36)

PERFORMANCE DATA:

• Electrical Characteristics $(T_A = 25^{\circ}C)$

DESCRIPTION AND APPLICATIONS:

Bipolarics' BPT1819E03 is a high performance silicon bipolar transistor intended for linear power applications at frequencies of 1.8 to 1.9 GHz. Typical applications include amplifiers in aeronautical, maritime and personal communication applications. The BPT1819E03 is bonded common emitter for linear applications. Linear output power of 3 Watts can be achieved. BeO flange packaging makes this device excellent for industrial and military products. Uniformity and reliability are assured by the use of ion implanted junctions, ion implanted ballast resistors and gold metallization.

Absolute Maximum Ratings:

SYMBOL	PARAMETERS	RATING	UNITS
V _{CES}	Collector-Base Voltage	40	V
V _{CEO}	Collector-Emitter Voltage	20	V
V _{EBO}	Emitter-Base Voltage	3.0	V
I _C	Collector Current	960	mA
T	Junction Temperature	200	°C
T _{STG}	Storage Temperature	-65 to 200	°C

θυς Thermal Resistance 11 C/W

SYMBOL	PARAMETERS & CONDITIONS $V_{CE} = 15V$, $I_{C} = 480$ mA, Class A,Common Emitter unless stated		UNIT	MIN.	TYP.	MAX.
BVCEO	Collector-Emitter Breakdown Voltage	Ic = 0.1 mA	V	20		
P _{1dB}	Output Power at 1dB compression	f = 1.8 GHz	W		3.0	
G _{PE}	Class A P _{OUT} = 4 W	f = 1.8 GHz	dB		10.0	
η	Efficiency:	Class A Class C	%		30 65	
h _{FE}	Forward Current Transfer Ratio: V _{CE} = 8.0V, I _C = 400 mA	f = 1.0 MHz		20	60	100
ССВ	Collector Base Capacitance:	f = 1.0 MHz I _E = 0	pF		8.0	
P _T	Total Power Dissipation		W			12