FUJITSU

SILICON HIGH SPEED POWER TRANSISTORS

2SA 1080

September 1979

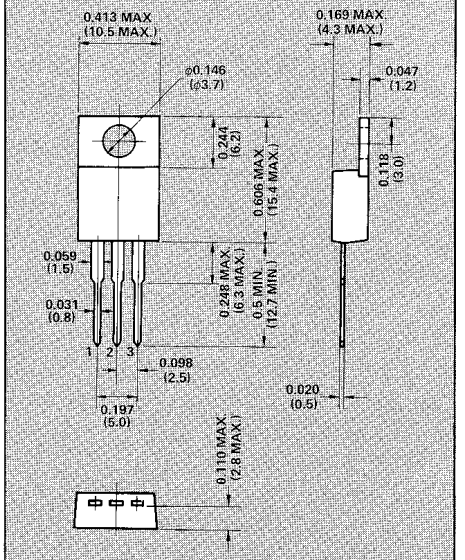
SILICON PNP RING EMITTER TRANSISTOR (RET)

The 2SA 1080 is a silicon PNP M.C.-Head amplifier use transistor fabricated with Fujitsu's unique Ring Emitter Transistor (RET) technology. RET devices are constructed with multiple emitters connected through diffused balast resistors which provide uniform current density. This structure permits the design of M.C.-Head amplifier use transistors with exceptional frequency response along with excellent current gain linearity.

A NPN complement, 2SC 2530, is available.

- High f_T=30MHz (TYP.)
- Excellent Current Gain-Linearity

OUTLINE DIMENSION
JEDEC TO-220



1: Base 2: Collector 3: Emitter
Dimension in inches and (millimeters)

ABSOLUTE MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector to Base Voltage	V_{CBO}	40	V
Emitter to Base Voltage	V_{EBO}	7	V
Collector to Emitter Voltage	V_{CEO}	40	V
Collector Current	I_C	0.5	A
Collector Power Dissipation (T_C = 25°C)	P_C	20	W
Junction Temperature	T_j	+150	°C
Storage Temperature Range	T_{stg}	-65~+150	°C

ELECTRICAL CHARACTERISTICS (T_a = 25°C)

Parameter	Symbol	Test Conditions	Limits			Unit
			Min.	Typ.	Max.	
Collector Cutoff Current	I_{CBO}	V_{CB} = 40V, I_E = 0	–	–	100	nA
Emitter Cutoff Current	I_{EBO}	V_{EB} = 7V, I_C = 0	–	–	100	nA
Collector Cutoff Current	I_{CEO}	V_{CE} = 40V, I_B = 0	–	–	500	nA
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = 100nA, I_E = 0	40	–	–	V
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 100nA, I_C = 0	7	–	–	V
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 1mA, R_{BE} = ∞	40	–	–	V
DC Current Gain	h_{FE}	V_{CE} = 5V, I_C = 10mA *	100	–	350	–
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 10mA, I_B = 1mA *	–	0.025	0.5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 10mA, I_B = 1mA *	–	0.65	1.0	V
Gain-Bandwidth Product	f_T	V_{CE}=10V, I_C=10mA, f=10MHz	–	30	–	MHz
Output Capacitance	C_{ob}	V_{CB}=20V, I_E=0, f=1MHz	–	65	–	pF

* Pulsed: Pulse Width ≦ 300μs
Duty Cycle ≦ 6%