

2SC2078

2010A

PNP Epitaxial Planar Silicon Transistor

27MHz High Frequency Power Amp Applications

Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

Collector to Base Voltage	V_{CB0}	80	V
Collector to Emitter Voltage	V_{CE0}	75	V
Emitter to Base Voltage	V_{EB0}	5	V
Collector Current	I_C	3	A
Peak Collector Current	I_{CP}	5	A
*Collector Dissipation	P_C	1.2	W
Junction Temperature	T_j	10	W
Storage Temperature	T_{stg}	150	$^\circ\text{C}$

$T_c=50^\circ\text{C}$

-55 to +150 $^\circ\text{C}$

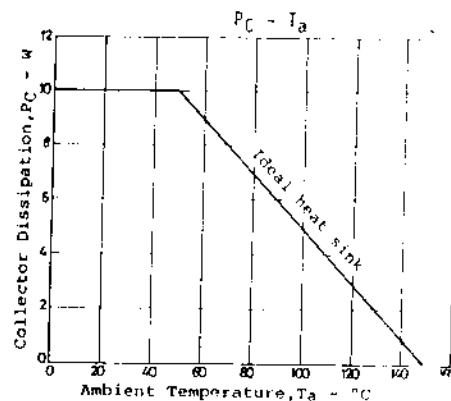
Electrical Characteristics Characteristics at $T_a=25^\circ\text{C}$

		min	typ	max	unit
Collector Cutoff Current	I_{C0}			10	μA
Emitter Cutoff Current	I_{E0}			10	μA
DC Current Gain	h_{FE}			200*	
Gain Bandwidth Product	f_T	100	150		MHz
Output Capacitance	C_{ob}		45	60	pF
C-E Saturation Voltage	$V_{CE(sat)}$		0.15	0.6	V
B-E Saturation Voltage	$V_{BE(sat)}$		0.9	1.2	V
C-B Saturation Voltage	$V_{(BR)CBO}$	80			V
C-E Saturation Voltage	$V_{(BR)CER}$	75			V
E-B Saturation Voltage	$V_{(BR)EB0}$	5			V
[At specified test circuit]					
Output Power	P_o		4.0		W
Power Efficiency	η		60		%

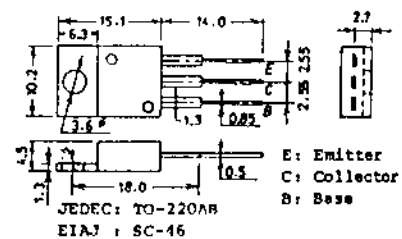
$V_{CC}=12\text{V}, f=27\text{MHz}, P_i=0.2\text{W}$

*:The 2SC2078 is classified by 0.5A h_{FE} as follows:

25	B	50	40	C	80	60	D	120	100	E	200
----	---	----	----	---	----	----	---	-----	-----	---	-----



Case Outline 2010A
(unit:mm)

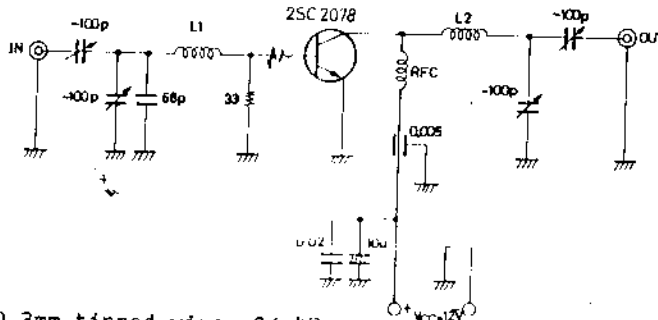


E: Emitter
C: Collector
B: Base

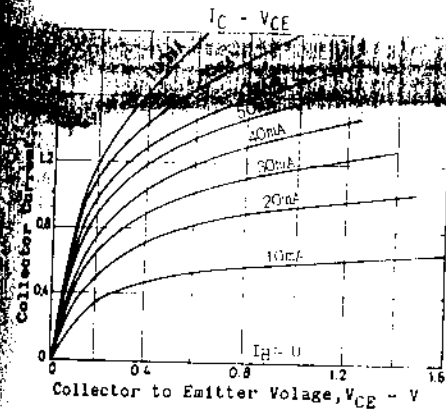
4147KI/3145KI/2274ki No.462-1/

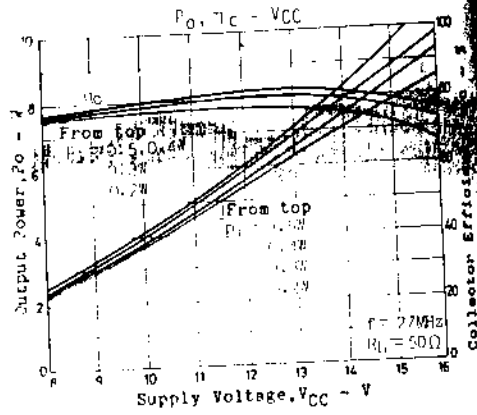
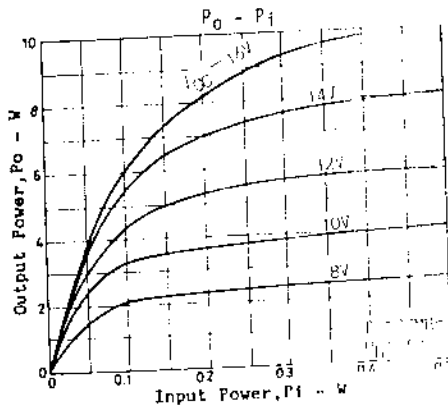
2SC2078

2078 27MHz Output Power Test Circuit



Coil data L1: 0.3mm tinned wire, 9 ϕ 4T
L2: 0.6mm tinned wire, 9 ϕ 4T
RFC 2.2uH





Feature

- Hig
- Goo
- Sma

Absolut

- Colle
- Colle
- Emit
- Coll
- Coll
- Junc
- Stor

Electr

- Coll
- Emit
- C-B
- C-E
- E-B
- DC C
- Gair
- Reve
- C-B
- C-E
- Nois

•:The

4