

SANYO	No.462E	2SC2078
	NPN Epitaxial Planar Silicon Transistor 27MHz RF Power Amp Applications	

Absolute Maximum Ratings at Ta=25°C

			unit
Collector-to-Base Voltage	V _{CBO}		80 V
Collector-to-Emitter Voltage	V _{CER}	R _{BE} =150Ω	75 V
Emitter-to-Base Voltage	V _{EBO}		5 V
Collector Current	I _C		3 A
Collector Current (Pulse)	I _{CP}		5 A
Collector Dissipation	P _C		1.2 W
		Tc=50°C	10 W
Junction Temperature	T _j		150 °C
Storage Temperature	T _{stg}		-55 to +150 °C

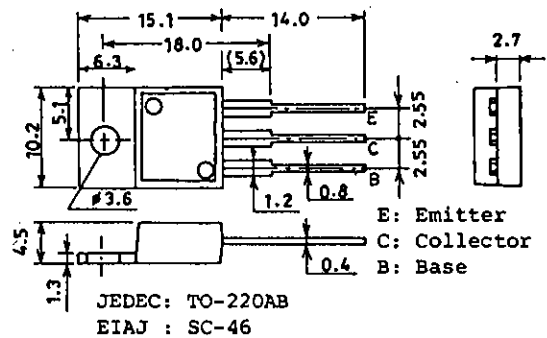
Electrical Characteristics Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	I _{CBO}	V _{CB} =40V, I _E =0			10	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =4V, I _C =0			10	μA
DC Current Gain	h _{FE}	V _{CE} =5V, I _C =0.5A	25*		200*	
Gain Bandwidth Product	f _T	V _{CE} =10V, I _C =0.1A	100	150		MHz
Output Capacitance	C _{ob}	V _{CB} =10V, f=1MHz		45	60	pF
C-E Saturation Voltage	V _{CE(sat)}	I _C =1A, I _B =0.1A	0.15	0.6		V
B-E Saturation Voltage	V _{BE(sat)}	I _C =1A, I _B =0.1A	0.9	1.2		V
C-B Saturation Voltage	V _{(BR)CBO}	I _C =100μA, I _B =0	80			V
C-E Saturation Voltage	V _{(BR)CER}	I _C =1mA, R _{BE} =150Ω	75			V
E-B Saturation Voltage	V _{(BR)EBO}	I _E =100μA, I _C =0	5			V
[At specified test circuit]						
Output Power	P _o	V _{CC} =12V, f=27MHz, P _i =0.2W	4.0			W
Power Efficiency	η		60			%

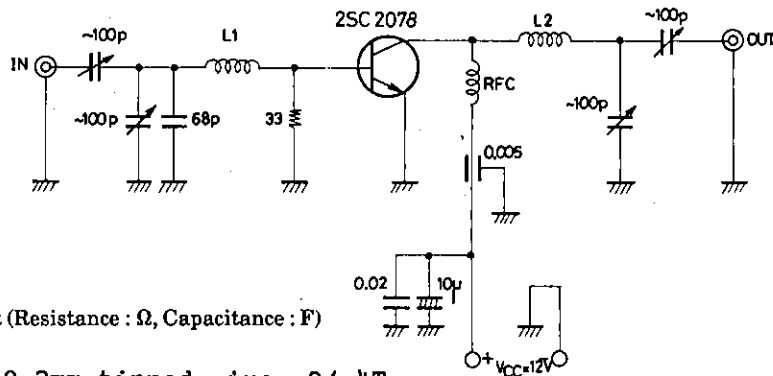
* The 2SC2078 is classified by 0.5A h_{FE} as follows:

25	B	50	40	C	80	60	D	120	100	E	200
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Package Dimensions 2010B
(unit:mm)

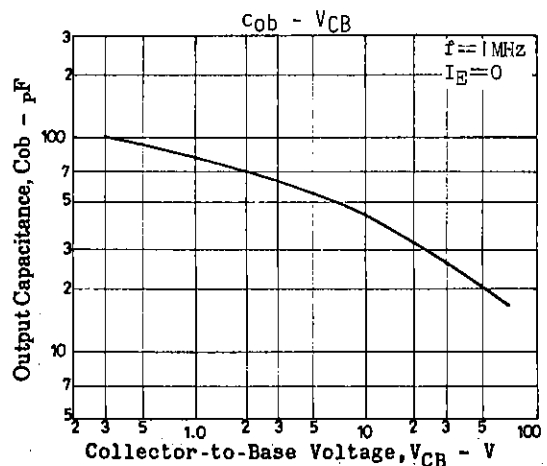
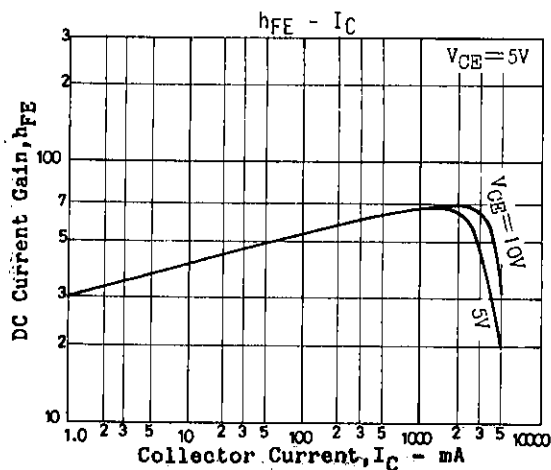
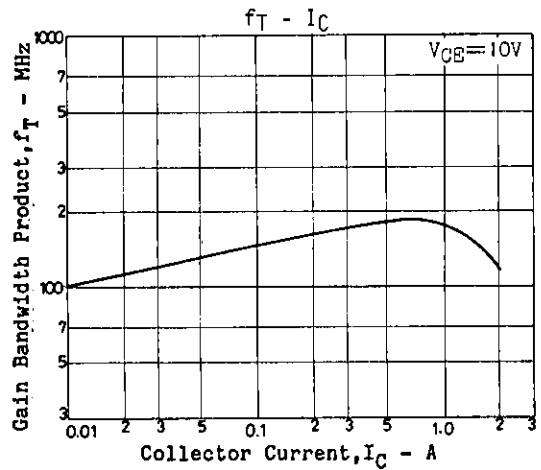
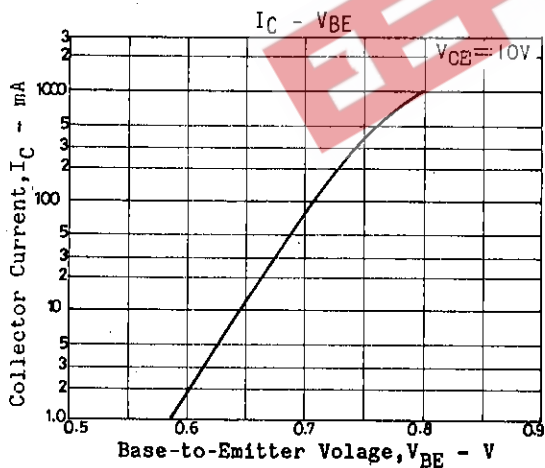
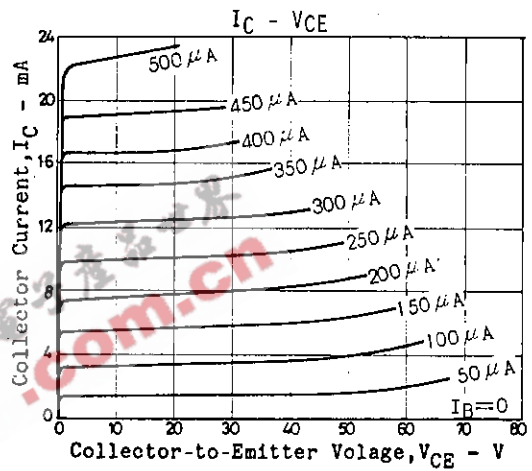
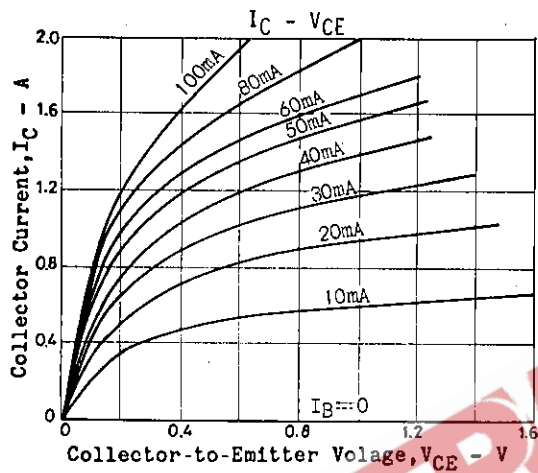


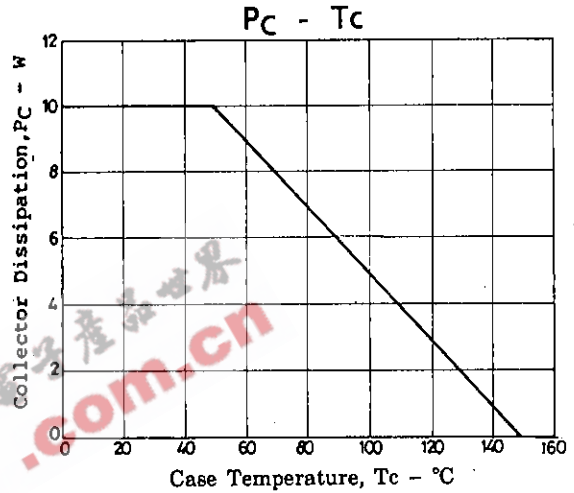
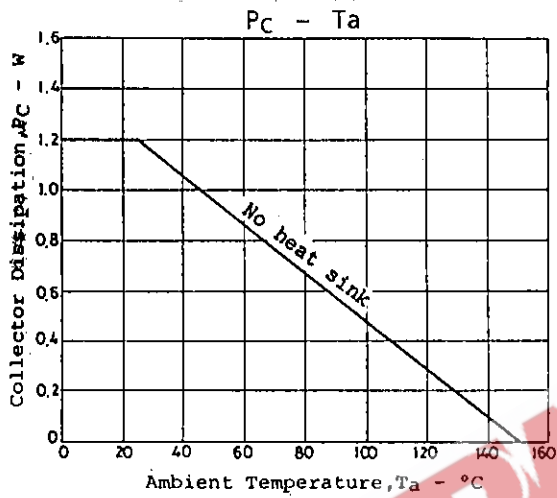
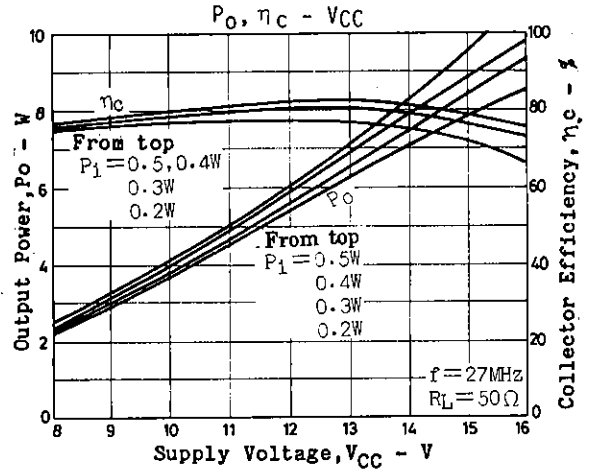
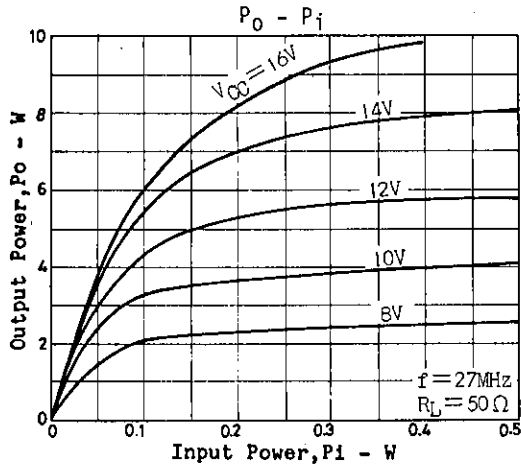
2SC2078 27MHz Output Power Test Circuit



Unit (Resistance : Ω, Capacitance : F)

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





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