

2SC2078



2010A

NPN Epitaxial Planar
Silicon Transistor

27MHz High Frequency Power Amp Applications

C662C

Absolute Maximum Ratings at Ta=25°C

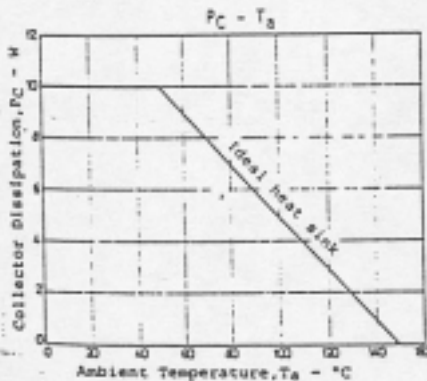
			unit
Collector to Base Voltage	V _{CB0}		80 V
Collector to Emitter Voltage	V _{CER}	R _{BE} =150ohm	75 V
Emitter to Base Voltage	V _{EBO}		5 V
Collector Current	I _C		3 A
Peak Collector Current	i _{cp}		5 A
Collector Dissipation	P _C	Tc=50°C	1.2 W
			10 W
Junction Temperature	T _j		150 °C
Storage Temperature	T _{stg}		-55 to +150 °C

Electrical Characteristics Characteristics at Ta=25°C

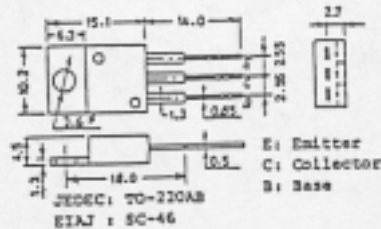
			min	typ	max	unit
Collector Cutoff Current	I _{CB0}	V _{CB} =40V, I _E =0			10	uA
Emitter Cutoff Current	I _{EBO}	V _{EB} =4V, I _C =0			10	uA
DC Current Gain	h _{FE}	V _{CE} =5V, I _C =0.5A	25*		200*	
Gain Bandwidth Product	f _T	V _{CE} =10V, I _C =0.1A	100	150		MHz
Output Capacitance	c _{ob}	V _{CB} =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 =100uA, I _B =0		80		V
C-E Saturation Voltage	V _{(BR)CER}	I _C =1mA, R _{BE} =150ohm		75		V
E-B Saturation Voltage	V _{(BR)EBO}	I _E =100uA, 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:

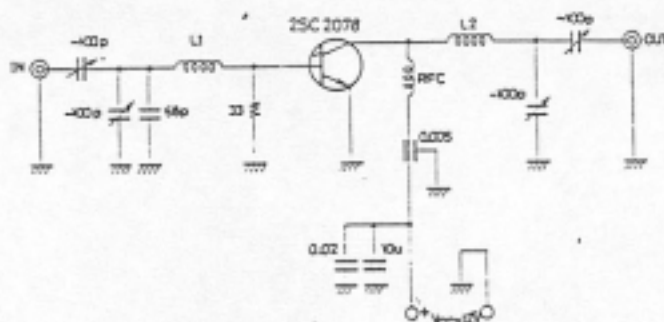
25	B	50	40	C	80	60	D	120	100	E	200
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Case Outline 2010A (unit:mm)



2SC2078 27MHz Output Power Test Circuit



Coil data L1: 0.3mm tinned wire, 96 4T
 L2: 0.6mm tinned wire, 96 4T
 RFC 2.2uH

