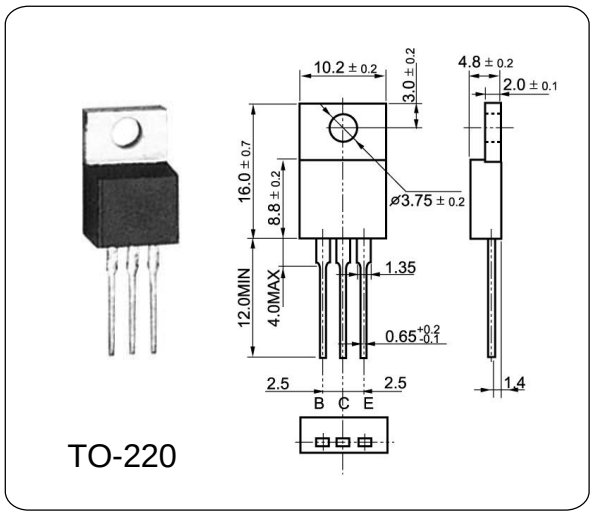
TIGER ELECTRONIC CO.,LTD

Product specification

27MHz RF Power Amplifier Applications — 2SC2078

Absolute Maximum Ratings (Ta = 25℃)

Parameter	I	Value	Unit
Collector-Base Voltage	V_{CBO}	80	V
Collector-Emitter Voltage	V_{CEO}	75	V
Emitter-Base Voltage	V_{EBO}	5.0	V
Collector Current	I_C	3.0	A
Base Current	I_B	1.5	A
Total Dissipation at	P_{tot}	10	W
Max. Operating Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55~150	°C



Electrical Characteristics (Ta = 25℃)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector Cut-off Current	I_{CBO}	V_{CE}=40V, I_E=0	—	—	10	uA
Emitter Cut-off Current	I_{EBO}	V_{EB}=4V, I_C=0	—	—	10	uA
Collector-Emitter Sustaining Voltage	V_{CEO}	I_C=10mA, I_B=0	75	—	—	V
DC Current Gain	$h_{FE(1)}$	V_{CE}=5V, I_C=0.5A	25	—	200	
	$h_{FE(2)}$	V_{CE}=5V, I_C=1.0A	10	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=1.0A,I_B=0.1A	—	—	0.6	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=1.0A,I_B=0.1A	—	—	1.2	V
Current Gain Bandwidth Product	f_T	V_{CE}=10V, I_C=0.1A	100	150	—	MHz
Output Capacitance	C_{ob}	V_{CB}=10V,I_E=0,f=1.0MHz	—	45	60	pF

h_{FE} Classification

Classification	B	C	D	E
h_{FE1}	25 ~ 50	40 ~ 80	60 ~ 120	100 ~ 200