

isc Silicon NPN Power Transistor

2SC2078

DESCRIPTION

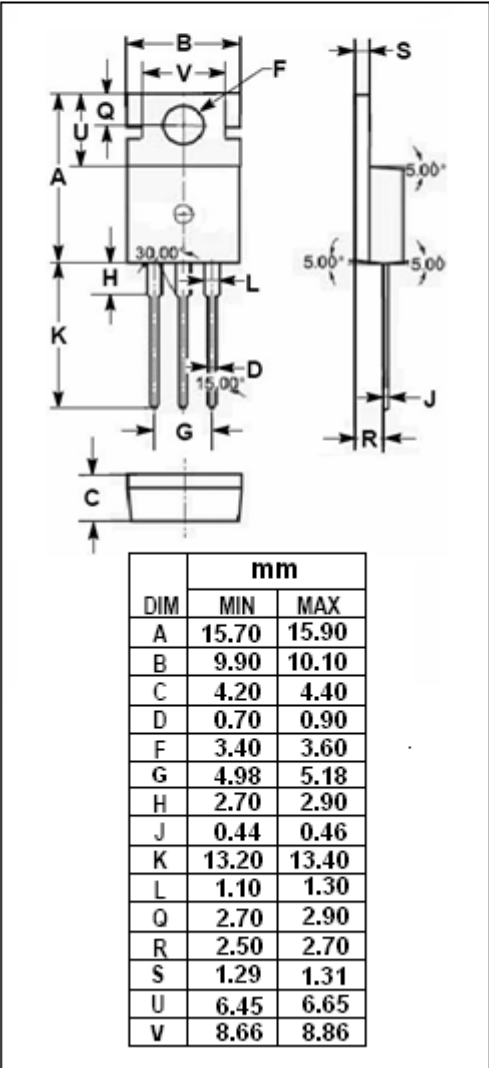
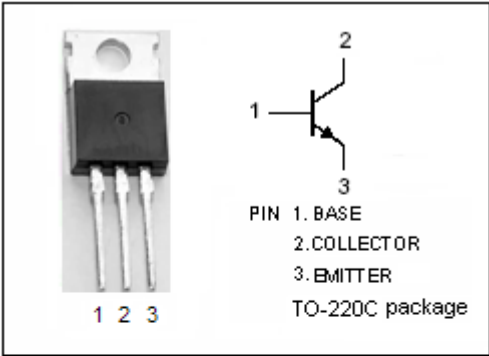
- Collector-Emitter Voltage-
:V_{CER}= 75V(Min) ;R_{BE}=150 Ω
- Collector Current-
:I_C=3A

APPLICATIONS

- 27MHz RF Power Amplifier Applications

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	80	V
V _{CER}	Collector-Emitter Voltage R _{BE} =150 Ω	75	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current-Continuous	3	A
I _{CM}	Collector Current-Peak	5	A
P _C	Collector Power Dissipation @ T _a =25℃	1.2	W
	Collector Power Dissipation @ T _C =50℃	10	
T _J	Junction Temperature	150	℃
T _{stg}	Storage Temperature Range	-55~150	℃



isc Silicon NPN Power Transistor**2SC2078****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C =0.1mA; I _B = 0	80			V
V _{(BR)CER}	Collector-Emitter Breakdown Voltage	I _C =0.1mA; R _{BE} =150 Ω	75			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E =0.1mA; I _C = 0	5			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C =1A; I _B = 0.1A			0.6	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C =1A; I _B = 0.1A			1.2	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 40V ; I _E = 0			10	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 4V; I _C = 0			10	μ A
h _{FE}	DC Current Gain	I _C = 500mA ; V _{CE} = 5V	25		200	
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f _{test} = 1MHz		45	60	pF
f _T	Current-Gain—Bandwidth Product	I _C = 500mA; V _{CE} = 10V	100			MHz
P _O	Output Power	V _{CC} = 12V; P _{in} =0.2W, f=27MHz	4.0			W
η	Power Efficiency		60			%

◆ h_{FE} Classifications

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