



# SEMICONDUCTORS

EIAJ Type No.  
2SC1778

## SILICON NPN EPITAXIAL PLANAR TRANSISTOR

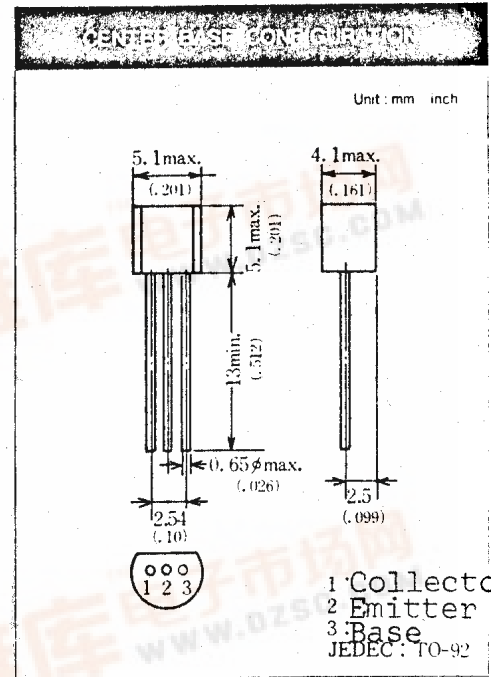
### APPLICATION:

- Mixer, Oscillator

### FEATURES:

### ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Collector-Base Voltage (V <sub>CB0</sub> )	25V
Collector-Emitter Voltage (V <sub>CEO</sub> )	20V
Emitter-Base Voltage (V <sub>EB0</sub> )	3V
Collector Current (I <sub>C</sub> )	15mA
Peak Collector Current (I <sub>CM</sub> )	150mW
Power Dissipation (P <sub>C</sub> )	125°C
Junction Temperature (T <sub>J</sub> )	
Storage Temperature (T <sub>stg</sub> )	



### ELECTRICAL CHARACTERISTICS (Ta=25°C)

Characteristic	Symbol	Conditions	Min.	Typ.	Max.	Unit
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	I <sub>C</sub> =2mA, I <sub>B</sub> =0	25			V
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0			1	μA
Collector Cutoff Current	I <sub>CE</sub>	V <sub>CE</sub> =25V, I <sub>B</sub> =0			100	μA
DC Current Gain	-h <sub>FE1</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =3mA	20	50		
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>					V
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =3mA	600			MHz
Collector Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =1mA, f=10.7MHz	0.5		0.6	pF

### h<sub>FE</sub> CLASSIFICATION

Class	O	P	Q	R	S	T

The device specifications are subject to change for improvement without prior notice.