# 2SA1790

### Silicon PNP epitaxial planar type

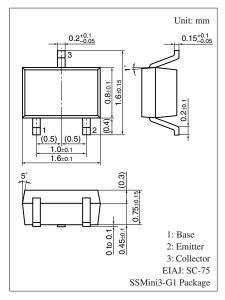
For low-frequency amplification Complementary to 2SC4626

#### Features

- High transition frequency  $f_T$
- SS-Mini type package allowing downsizing of the equipment and automatic insertion through the tape packing

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	-30	V	
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	-20	V	
Emitter-base voltage (Collector open)	V <sub>EBO</sub>	-5	V	
Collector current	I <sub>C</sub>	-30	mA	
Collector power dissipation	P <sub>C</sub>	125	mW	
Junction temperature	Tj	125	°C	
Storage temperature	T <sub>stg</sub>	-55 to +125	°C	





Marking Symbol: E

#### Electrical Characteristics $T_a = 25^{\circ}C \pm 3^{\circ}C$

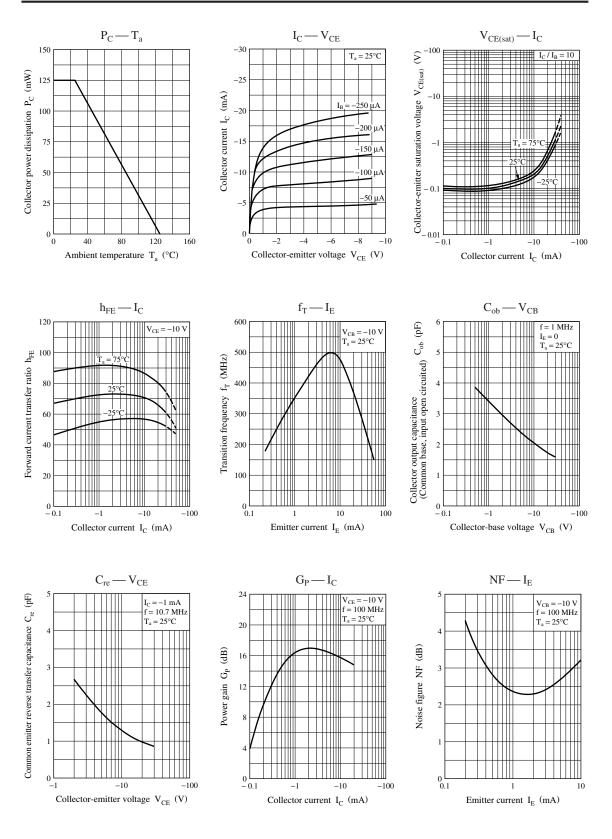
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Base-emitter saturation voltage	V <sub>BE</sub>	$V_{CE} = -10 \ \mu A, I_C = -1 \ mA$		- 0.7		V
Collector-base cutoff current (Emitter open)	I <sub>CBO</sub>	$V_{CB} = -10 \text{ V}, I_E = 0$			- 0.1	μΑ
Collector-emitter cutoff current (Base open)	I <sub>CEO</sub>	$V_{CE} = -20 \text{ V}, I_B = 0$			-100	μΑ
Emitter-base cutoff current (Collector open)	I <sub>EBO</sub>	$V_{EB} = -5 V, I_C = 0$			-10	μΑ
Forward current transfer ratio *	h <sub>FE</sub>	$V_{CE} = -10 \text{ V}, I_C = -1 \text{ mA}$	70		220	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	$I_{\rm C} = -10$ mA, $I_{\rm B} = -1$ mA		- 0.1		V
Transition frequency	f <sub>T</sub>	$V_{CB} = -10 \text{ V}, I_E = 1 \text{ mA}, f = 200 \text{ MHz}$	150	300		MHz
Noise figure	NF	$V_{CB} = -10 V, I_E = 1 mA, f = 5 MHz$		2.8	4.0	dB
Reverse transfer impedance	Z <sub>rb</sub>	$V_{CB} = -10 \text{ V}, I_E = 1 \text{ mA}, f = 2 \text{ MHz}$		22	60	Ω
Reverse transfer capacitance	C <sub>re</sub>	$V_{CB} = -10 \text{ V}, I_E = 1 \text{ mA}, f = 10.7 \text{ MHz}$		1.2	2.0	pF
(Common emitter)						

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. \*: Rank classification

Rank	В	С
$h_{\rm FE}$	70 to 140	110 to 220

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