2SA 1266
2SA 1266 Ⓛ

SILICON PNP TRANSISTOR
EPITAXIAL PLANAR TYPE (PCT PROCESS)

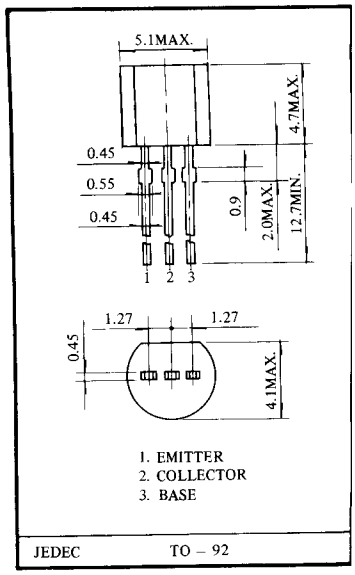
APPLICATIONS

- Low Frequency Amplifier
- Low Noise Amplifier

FEATURES

- Excellent h_{FE} Linearity, $h_{FE}(0.1mA)/h_{FE}(2mA) = 0.95$ (Typ.)
- Excellent Safe Operation Area
- Low Noise 2SA1266 NF = 1dB (TYP), 10dB (Max.)
  2SA1266Ⓛ NF = 0.2dB (TYP), 3dB (Max.)
- Complementary to the 2SC3198/2SC3198Ⓛ

Unit in mm



JEDEC TO-92

■ MAXIMUM RATINGS (Ta = 25℃)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	−50	V
Collector-Emitter Voltage	V_{CEO}	−50	V
Emitter-Base Voltage	V_{EBO}	−5	V
Collector Current	I_C	−150	mA

CHARACTERISTIC	SYMBOL	RATING	UNIT
Emitter Current	I_E	150	mA
Collector Power Dissipation	P_C	400	mW
Junction Temperature	T_j	125	℃
Storage Temperature Range	T_{stg}	−55~125	℃

■ ELECTRICAL CHARACTERISTICS (Ta = 25℃)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut off Current		I_{CBO}	V_{CB} = −50V, I_E = 0	−	−	−0.1	μA
Emitter Cut off Current		I_{EBO}	V_{EB} = −5V, I_C	−	−	−0.1	μA
DC Current Gain (1)		$h_{FE(1)}$	V_{CE} = −6V, I_C = −2mA	70	−	400	-
DC Current Gain (2)		$h_{FE(2)}$	V_{CE} = −6V, I_C = −150mA	25	−	−	-
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C = −100mA, I_B = −10mA	−	−0.1	−0.3	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	I_C = −100mA, I_B = −10mA	−	−	−1.1	V
Transition Frequency		f_T	V_{CE} = −10V, I_E = 1mA	80	−	−	MHz
Output Capacitance		C_{ob}	V_{CB} = −10V, I_C = 0, f = 1MHz	−	4	7	pF
Base Spreading Resistance		$r_{bb'}$	V_{CB} = −10V, I_C = −1mA, f = 30MHz	−	30	−	Ω
Noise Figure	2SA1266	NF	V_{CE} = −6V, I_C = 0.1mA	−	1.0	10	dB
	2SA1266Ⓛ		Rg = 10kΩ, f = 1KHz	−	0.2	3	

■ NOTE: According to h_{FE} (1), Classified as follows

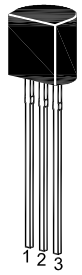
O	70−140	Y	120~240	GR	200~400

ST 2SA1266

PNP Silicon Epitaxial Planar Transistor

for switching and AF amplifier applications.
The transistor is subdivided into three groups, O, Y and G according to its DC current gain.

On special request, these transistors can be manufactured in different pin configurations.



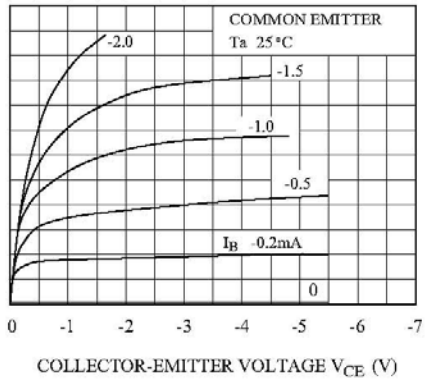
1. Emitter 2. Collector 3. Base
TO-92 Plastic Package

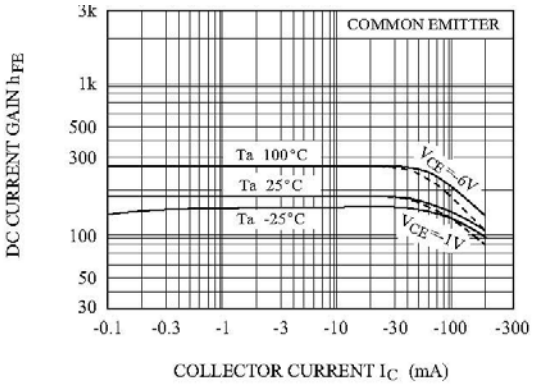
Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	50	V
Collector Emitter Voltage	$-V_{CEO}$	50	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	150	mA
Base Current	$-I_B$	50	mA
Power Dissipation	P_{tot}	500	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

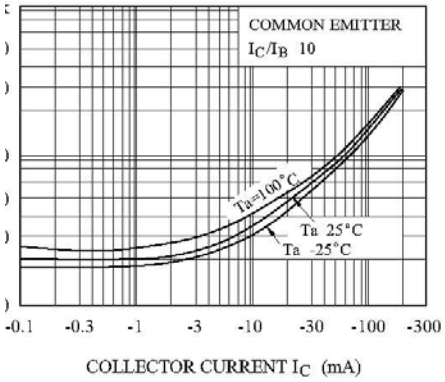
Characteristics at T_a = 25 °C

Parameter		Symbol	Min.	Max.	Unit
DC Current Gain					
at $-V_{CE}$ = 6 V, $-I_C$ = 2 mA	Current Gain Group O	h_{FE}	70	140	-
	Y	h_{FE}	120	240	-
	G	h_{FE}	200	400	-
at $-V_{CE}$ = 6 V, $-I_C$ = 150 mA		h_{FE}	25	-	-
Collector Base Cutoff Current at $-V_{CB}$ = 50 V		$-I_{CBO}$	-	0.1	µA
Emitter Base Cutoff Current at $-V_{EB}$ = 5 V		$-I_{EBO}$	-	0.1	µA
Collector Emitter Saturation Voltage at $-I_C$ = 100 mA, $-I_B$ = 10 mA		$-V_{CE(sat)}$	-	0.3	V
Base Emitter Saturation Voltage at $-I_C$ = 100 mA, $-I_B$ = 10 mA		$-V_{BE(sat)}$	-	1.1	V
Transition Frequency at $-V_{CE}$ = 10 V, $-I_C$ = 1 mA		f_T	80	-	MHz
Collector Output Capacitance at $-V_{CB}$ = 10 V, f = 1 MHz		C_{ob}	-	7	pF
Noise Figure at $-V_{CE}$ = 6 V, $-I_C$ = 0.1 V, f = 1 KHz, R_G = 10 KΩ		NF	-	10	dB

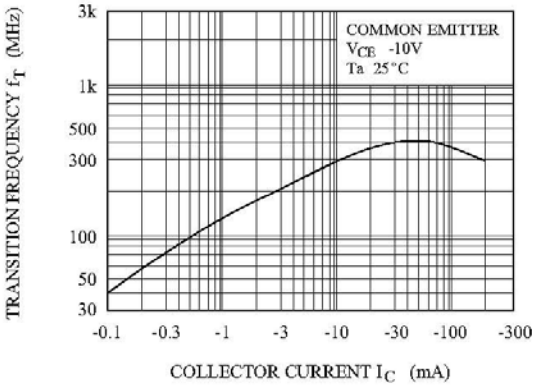




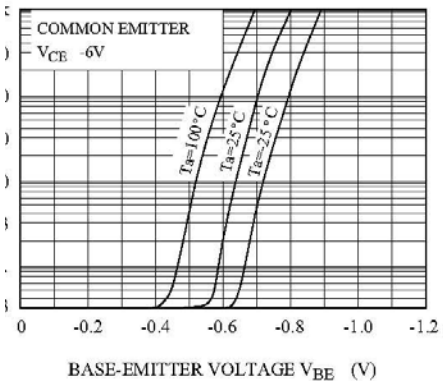
$V_{CE(sat)}$ - I_C



f_T - I_C



I_B - V_{BE}



P_C - T_a