

( SMALL-SIGNAL TRANSISTOR )

# 2SC3242, 2SC3242A

FOR LOW FREQUENCY POWER AMPLIFY APPLICATION  
SILICON NPN EPITAXIAL TYPE

## DESCRIPTION

2SC3242, 2SC3242A is a silicon NPN epitaxial type transistor designed for small type motor drive, solenoid drive and power supply application.

Complementary with 2SA1282, 2SA1282A.

## FEATURE

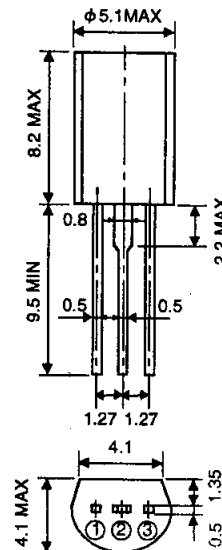
- High collector current  $I_C=2A$
- Low  $V_{CE(sat)}$   
 $V_{CE(sat)}=0.17V$  typ (@  $I_C=1A$ )
- High  $h_{FE}$   $h_{FE}=150$  to  $800$
- High collector dissipation  $P_C=900mW$

## APPLICATION

Small type motor drive, power supply for VCR, deck, player.

## OUTLINE DRAWING

Unit:mm



### TERMINAL CONNECTOR

- ① : EMITTER
  - ② : COLLECTOR
  - ③ : BASE
- EIAJ : —  
JEDEC : —

Note)

The dimension without tolerance represent central value.

## MAXIMUM RATINGS (Ta=25°C)

Symbol	Parameter	Ratings		Unit
		2SC3242	2SC3242A	
V <sub>CB0</sub>	Collector to Base voltage	20	20	V
V <sub>EB0</sub>	Emitter to Base voltage	6	6	V
V <sub>CE0</sub>	Collector to Emitter voltage	16	20	V
I <sub>CM</sub>	Peak Collector current	3		A
I <sub>C</sub>	Collector current	2		A
P <sub>C</sub>	Collector dissipation (Ta=25°C)	900		mW
T <sub>j</sub>	Junction temperature	+150		°C
T <sub>stg</sub>	Storage temperature	-55 to +150		°C

## ELECTRICAL CHARACTERISTICS (Ta=25°C)

Symbol	Parameter	Test conditions	Limits						Unit
			2SC3242			2SC3242A			
			Min	Typ	Max	Min	Typ	Max	
V <sub>(BR)CBO</sub>	C to B break down voltage	I <sub>C</sub> =10 μA, I <sub>E</sub> =0	20			20			V
V <sub>(BR)EBO</sub>	E to B break down voltage	I <sub>E</sub> =10 μA, I <sub>C</sub> =0	6			6			V
V <sub>(BR)CEO</sub>	C to E break down voltage	I <sub>C</sub> =2mA, R <sub>BE</sub> =∞	16			20			V
I <sub>CB0</sub>	Collector cut off current	V <sub>CB</sub> =16V, I <sub>E</sub> =0			0.2			0.2	μA
I <sub>EB0</sub>	Emitter cut off current	V <sub>EB</sub> =4V, I <sub>C</sub> =0			0.2			0.2	μA
h <sub>FE</sub> *	DC forward current gain	V <sub>CE</sub> =4V, I <sub>C</sub> =100mA	150		800	150		500	—
V <sub>CE(sat)</sub>	C to E saturation voltage	I <sub>C</sub> =1A, I <sub>B</sub> =50mA		0.17	0.3		0.17	0.3	V
f <sub>T</sub>	Gain band width product	V <sub>CE</sub> =2V, I <sub>E</sub> =-10mA		80			80		MH
C <sub>ob</sub>	Collector output capacitance	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz		28			28		pF

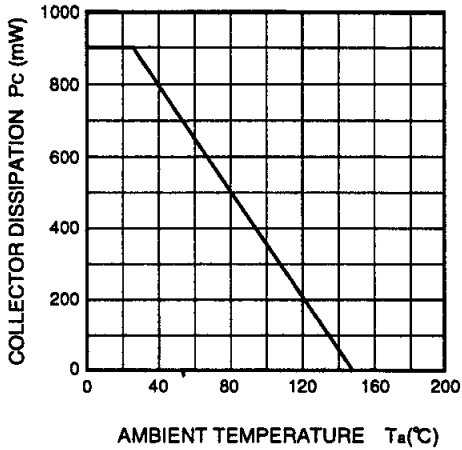
\* : It shows h<sub>FE</sub> classification in right table

Item	E	F	G
h <sub>FE</sub>	150 to 300	250 to 500	400 to 800

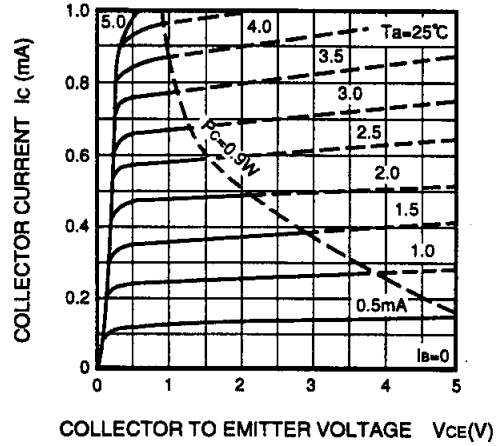
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**TYPICAL CHARACTERISTICS**

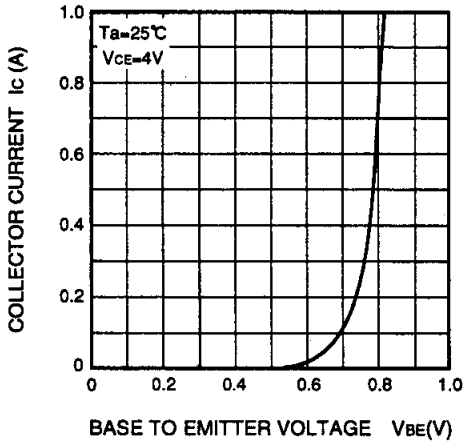
**COLLECTOR DISSIPATION VS. AMBIENT TEMPERATURE**



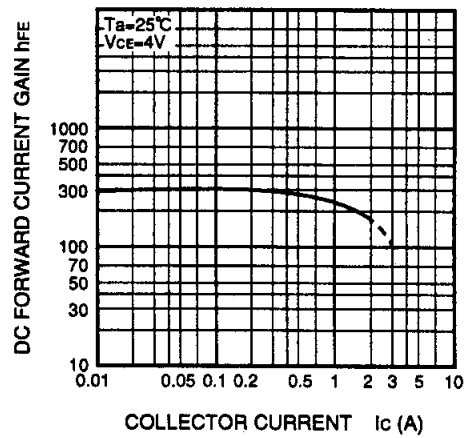
**COMMON EMITTER OUTPUT**



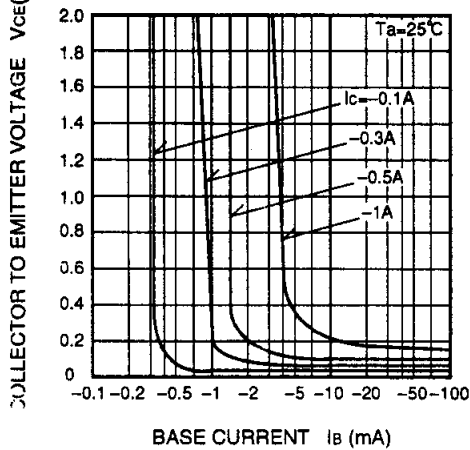
**COMMON EMITTER TRANSFER**



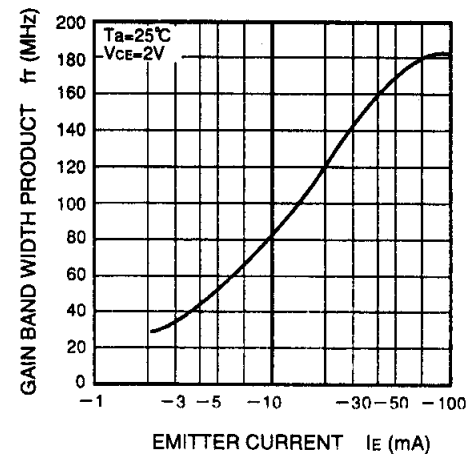
**DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT**



**COLLECTOR TO EMITTER SATURATION VOLTAGE VS. BASE CURRENT**



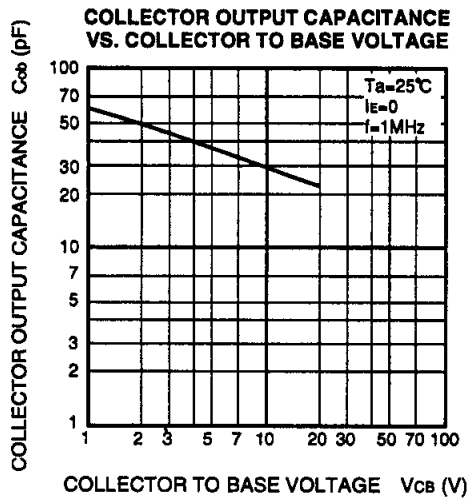
**GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT**



(SMALL-SIGNAL TRANSISTOR)  
**2SC3242, 2SC3242A**

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