

2SC3242, 2SC3242A

FOR LOW FREQUENCY POWER AMPLIFY APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

Mitsubishi 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

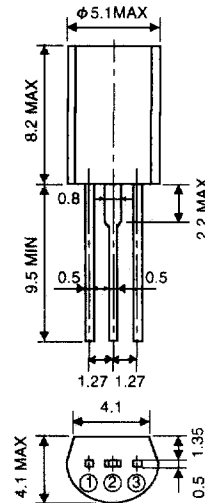
- High collector current $I_c=2A$
- Low $V_{CE(sat)}$
 $V_{CE(sat)}=0.17V$ typ (@ $I_c=1A$)
- High h_{FE} $h_{FE}=150$ to 800
- High collector dissipation $P_c=900mW$

APPLICATION

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

OUTLINE DRAWING

Unit:mm



TERMINAL CONNECTOR

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

Note)
The dimension without tolerance represent central value.

MAXIMUM RATINGS (Ta=25°C)

Symbol	Parameter	Ratings		Unit
		2SC3242	2SC3242A	
V_{CBO}	Collector to Base voltage	20	20	V
V_{EBO}	Emitter to Base voltage	6	6	V
V_{CEO}	Collector to Emitter voltage	16	20	V
I_{CM}	Peak Collector current	3		A
I_c	Collector current	2		A
P_c	Collector dissipation (Ta=25°C)	900		mW
T_j	Junction temperature	+150		°C
T_{sg}	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	
$V_{(BR)CBO}$	C to B break down voltage	$I_c=10\mu A, I_E=0$	20			20			V
$V_{(BR)EBO}$	E to B break down voltage	$I_E=10\mu A, I_c=0$	6			6			V
$V_{(BR)CEO}$	C to E break down voltage	$I_c=2mA, R_{BE}=\infty$	16			20			V
I_{CBO}	Collector cut off current	$V_{CB}=16V, I_E=0$			0.2			0.2	μA
I_{EBO}	Emitter cut off current	$V_{EB}=4V, I_c=0$			0.2			0.2	μA
h_{FE}^*	DC forward current gain	$V_{CE}=4V, I_c=100mA$	150		800	150		500	—
$V_{CE(sat)}$	C to E saturation voltage	$I_c=1A, I_b=50mA$		0.17	0.3		0.17	0.3	V
ft	Gain band width product	$V_{CE}=2V, I_E=-10mA$		80			80		MHz
C_{ob}	Collector output capacitance	$V_{CB}=10V, I_E=0, f=1MHz$		28			28		pF

* : It shows h_{FE} classification in right table.

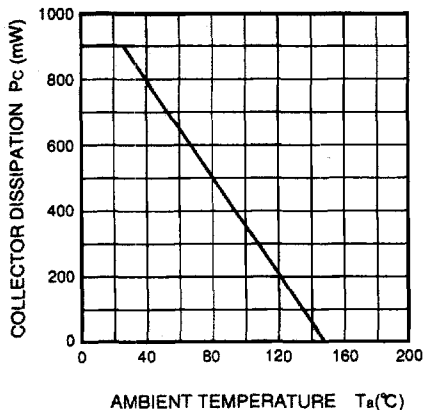
Item	E	F	G
h_{FE}	150 to 300	250 to 500	400 to 800

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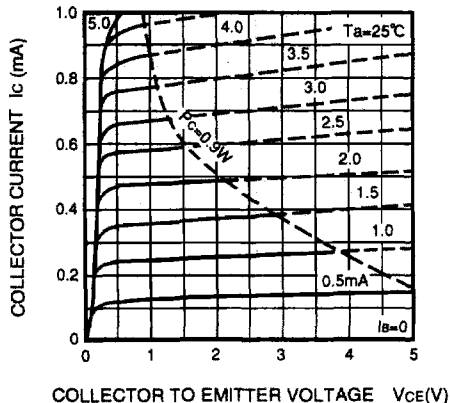
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TYPICAL CHARACTERISTICS

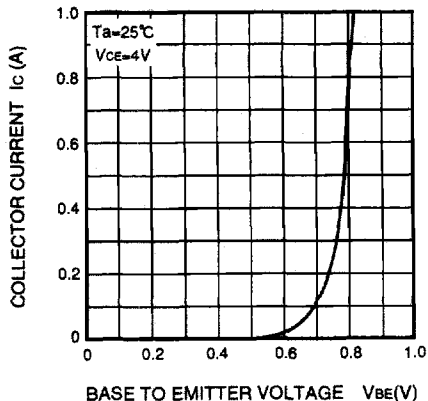
COLLECTOR DISSIPATION VS. AMBIENT TEMPERATURE



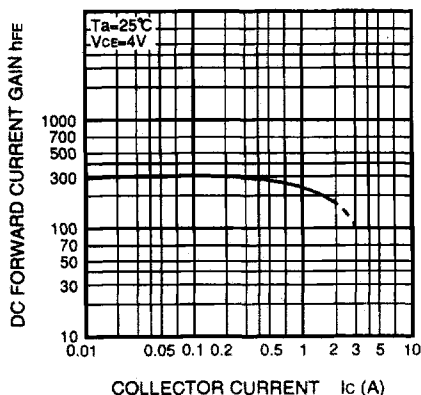
COMMON EMITTER OUTPUT



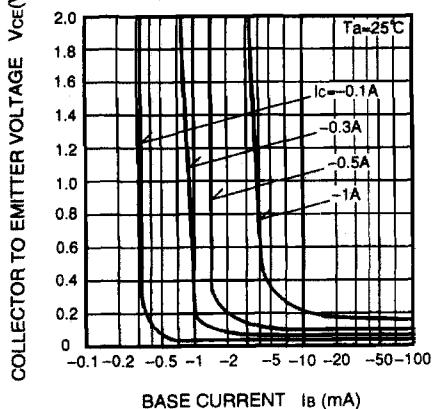
COMMON EMITTER TRANSFER



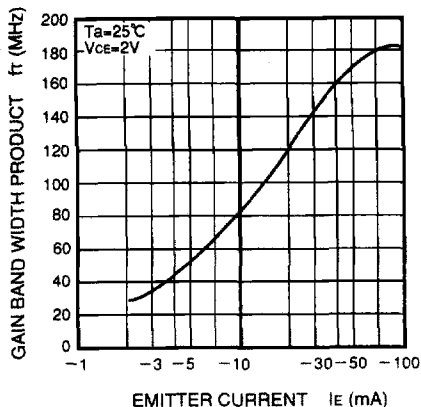
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. BASE CURRENT



GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT



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