

〈Transistor〉

2SA2002

For High Current Application
Silicon PNP Epitaxial Type Micro(Frame type)

DESCRIPTION

2SA2002 is a silicon PNP epitaxial type transistor designed with high collector current ,small $V_{CE(sat)}$.

FEATURE

- High collector current
 $I_{CM}=-1000mA$
- Low collector to emitter saturation voltage
 $V_{CE(sat)}=-0.25V$ typ
- Excellent linearity of DC forward current gain
- High gain band width product
 $f_T=180MHz$ typ
- High collector dissipation
 $P_C=600mW$

APPLICATION

Small type motor drive, relay drive, power supply application.

MAXIMUM RATINGS ($T_a=25^{\circ}C$)

SYMBOL	PARAMETER	RATINGS	UNIT
V_{CBO}	Collector to Base voltage	-25	V
V_{EBO}	Emitter to Base voltage	-4	V
V_{CEO}	Collector to Emitter voltage	-20	V
I_{CM}	Peak collector current	-1000	mA
I_C	Collector current	-700	mA
P_C	Collector to Base voltage	600	mW
T_J	Junction temperature	+150	$^{\circ}C$
T_{stg}	Storage temperature	-55 to +150	$^{\circ}C$

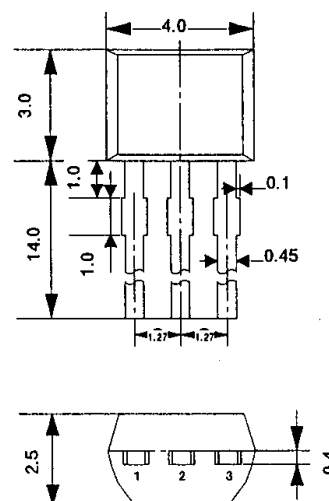
ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}C$)

SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
$V_{(BR)CBO}$	C to B break down voltage	$I_C=-10\mu A, I_E=0$	-25			V
$V_{(BR)EBO}$	E to B break down voltage	$I_E=-10\mu A, I_C=0$	-4			V
$V_{(BR)CEO}$	C to E break down voltage	$I_C=-100\mu A, R_{BE}=\infty$	-20			V
I_{CBO}	Collector cut off current	$V_{CB}=-25V, I_E=0$			-1	μA
I_{EBO}	Emitter cut off current	$V_{EB}=-2V, I_C=0$			-1	μA
$h_{FE} *$	DC forward current gain	$V_{CE}=-4V, I_C=-100mA$	150		800	—
$V_{CE(sat)}$	C to E saturation voltage	$I_C=-500mA, I_B=-25mA$		-0.25	-0.5	V
f_T	Gain band width product	$V_{CE}=-6V, I_E=10mA$		180		MHz

ITEM	E	F	G
h_{FE}	150~300	250~500	400~800

OUTLINE DRAWING

UNIT:mm



TERMINAL CONNECTOR

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

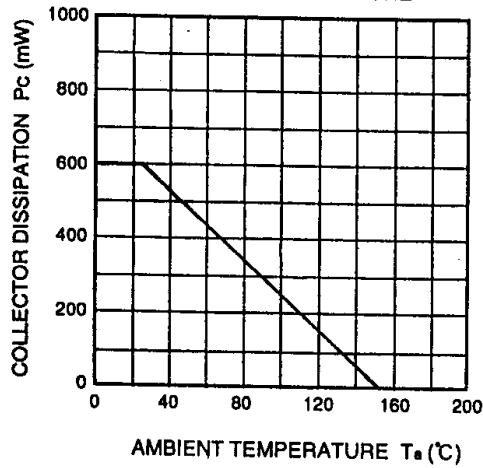
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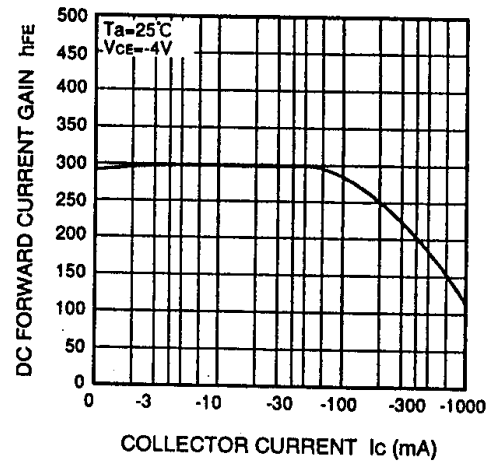
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TYPICAL CHARACTERISTICS

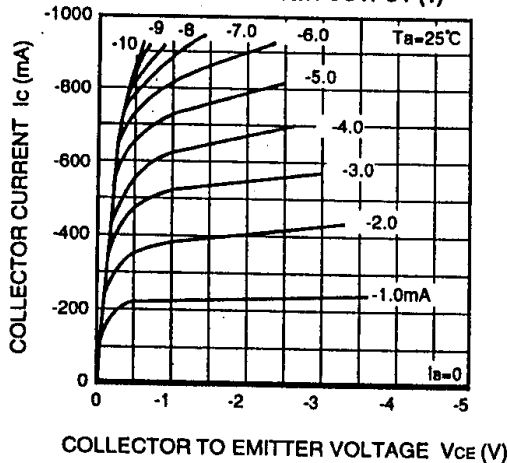
COLLECTOR DISSIPATION VS.
AMBIENT TEMPERATURE



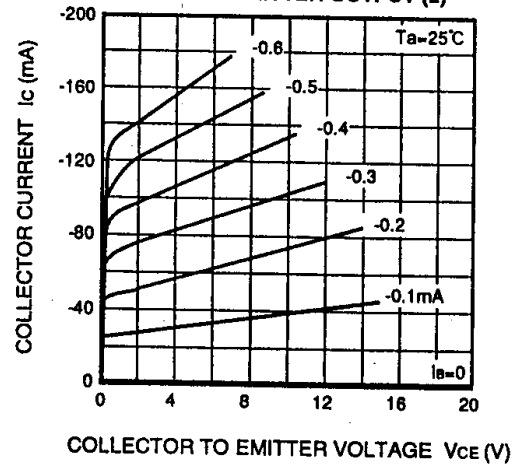
DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT



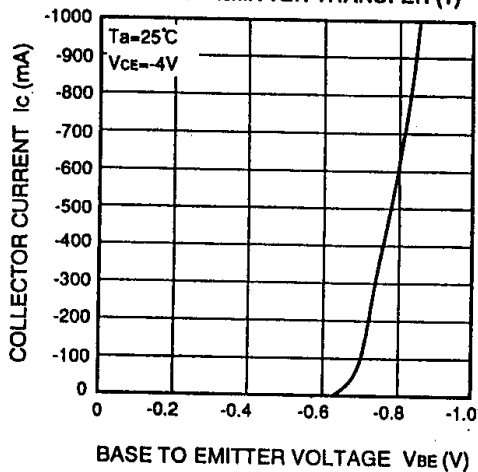
COMMON EMITTER OUTPUT (1)



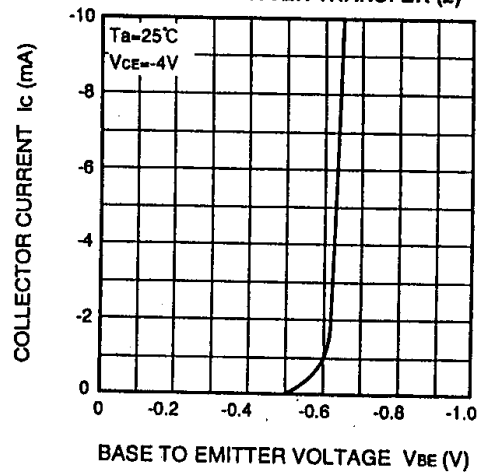
COMMON EMITTER OUTPUT (2)



COMMON EMITTER TRANSFER (1)



COMMON EMITTER TRANSFER (2)



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