INA5002AP1

For low frequency power amplify
Silicon PNP Epitaxial

DESCRIPTION

INA5002AP1 is a silicon PNP epitaxial transistor designed for relay drive or Power supply application.

FEATURE

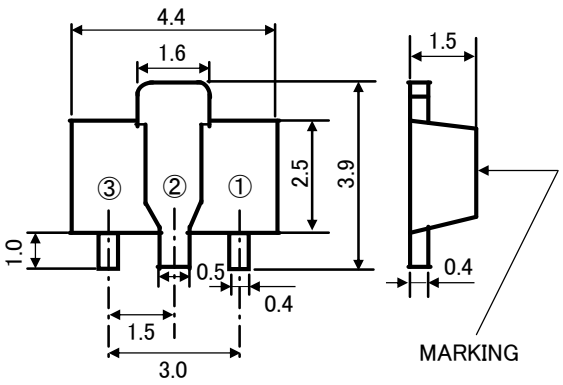
- ●Small package for easy mounting.
- ●High voltage V_{CEO}=−60V
- ●High collector current I_C=−3A
- ●Low VCE(sat) VCE(sat)=−0.6V max(@I_C=−3A/ I_B=−300mA)
- ●High collector dissipation P_C=500mW

APPLICATION

DC･DC converter, Relay drive, Motor drive

OUTLINE DRAWING

UNIT：mm



TERMINAL CONNECTOR

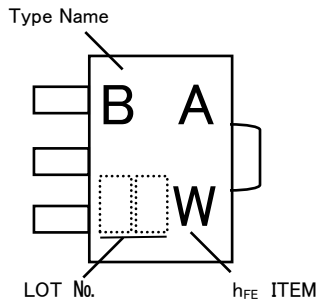
①：BASE
②：COLLECTOR
③：EMITTER

JEITA：SC−62
JEDEC：SOT−89

MAXIMUM RATING(Ta=25℃)

SYMBOL	PARAMETER	RATING	UNIT
V_{CBO}	Collector to Base voltage	−80	V
V_{EBO}	Emitter to Base voltage	−6	V
V_{CEO}	Collector to Emitter voltage	−60	V
I_C	Collector current	−3	A
I_{CM}	Peak Collector current	−6	
P_C	Collector dissipation(Ta=25℃)	500	mW
T_j	Junction temperature	＋150	℃
T_{stg}	Storage temperature	−55～＋150	℃

MARKING

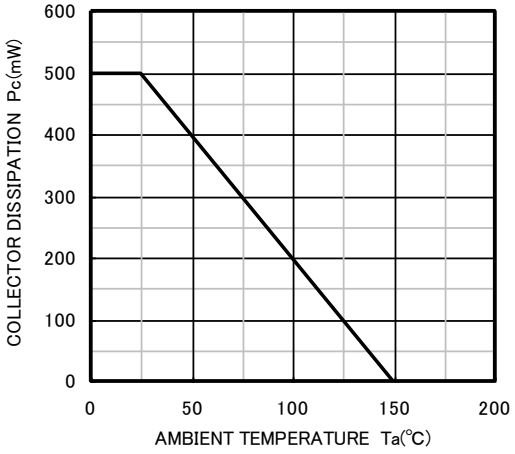


ELECTRICAL CHARACTERISTICS(Ta=25℃)

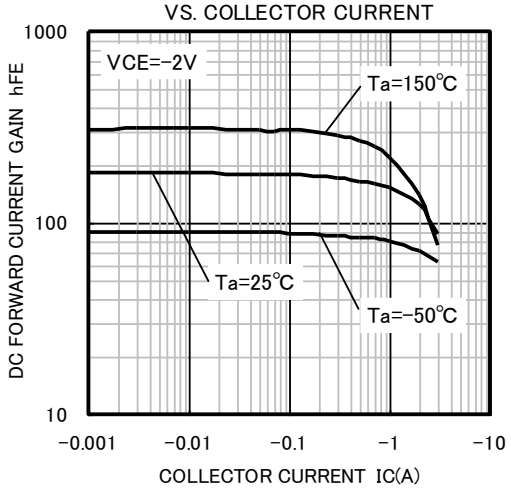
SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
$V_{(BR)CBO}$	C to B breakdown voltage	I_C=−100μA, I_E=0mA	−80	−	−	V
$V_{(BR)EBO}$	E to B breakdown voltage	I_E=−100μA, I_C=0mA	−6	−	−	V
$V_{(BR)CEO}$	C to E breakdown voltage	I_C=−1mA, R_{BE}=∞	−60	−	−	V
I_{CBO}	Collector cut off current	V_{CB}=−60V, I_E=0mA	−	−	−1.0	μA
I_{EBO}	Emitter cut off current	V_{EB}=−4V, I_C=0mA	−	−	−1.0	μA
h_{FE}	DC forward current gain	V_{CE}=−2V, I_C=−0.5A	100	−	300	−
$V_{CE(sat)}$	C to E saturation voltage	I_C=−3A, I_B=−300mA	−	−	−0.5	V
f_T	Gain band width product	V_{CE}=−5V, I_E=100mA	−	200	−	MHz
Cob	Collector output capacitance	V_{CB}=−10V, I_E=0mA, f=1MHz	−	25	−	pF

TYPICIAL CHARACTERISTICS

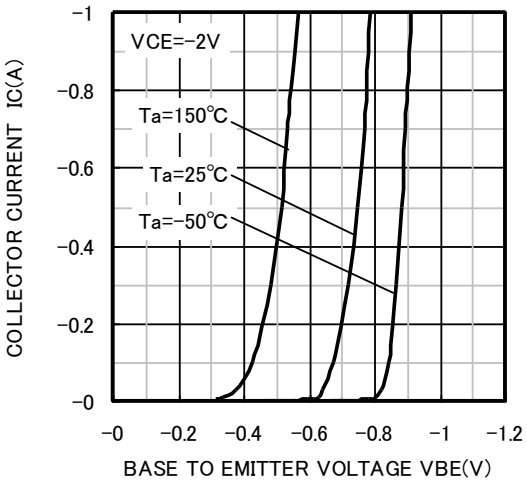
COLLECTOR DISSIPATION
VS. AMBIENT TEMPERATURE



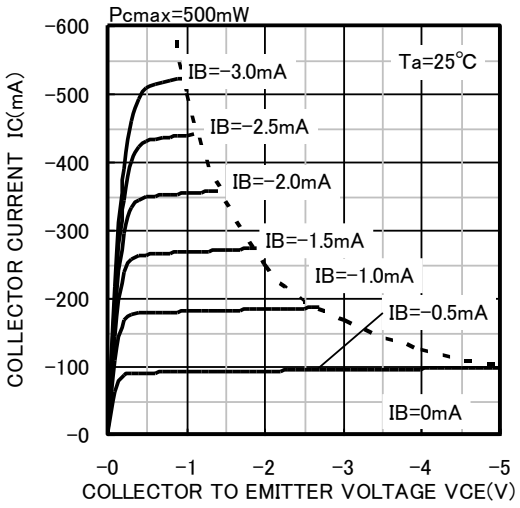
DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT



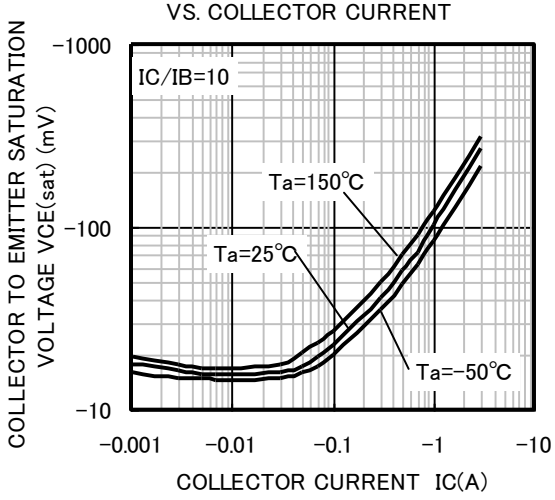
COMMON EMITTER TRANSFER



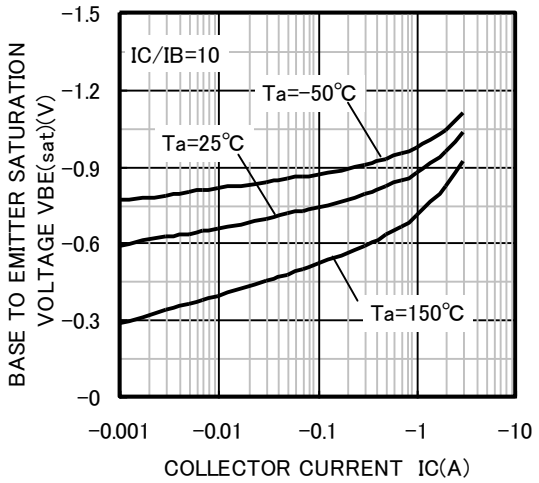
COMMON EMITTER OUTPUT



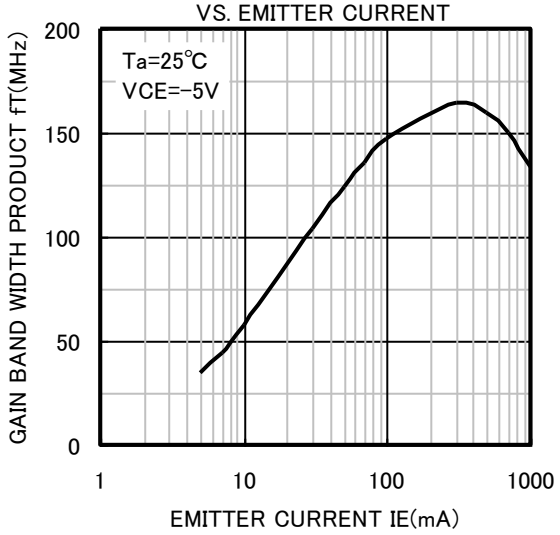
COLLECTOR TO EMITTER SATURATION VOLTAGE
VS. COLLECTOR CURRENT



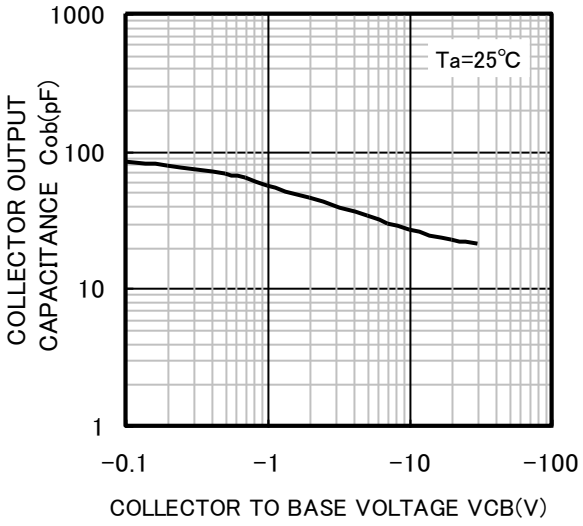
BASE TO EMITTER SATURATION VOLTAGE
VS. COLLECTOR CURRENT



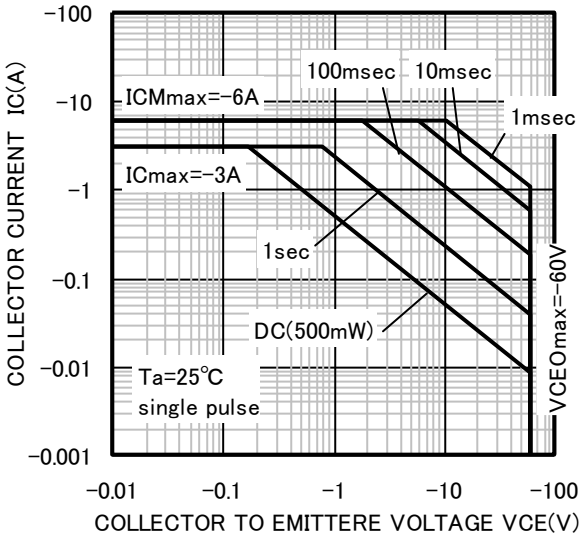
GAIN BAND WIDTH PRODUCT
VS. EMITTER CURRENT



COLLECTOR OUTPUT CAPACITANCE
VS. COLLECTOR TO BASE VOLTAGE



ASO



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