

INC5002AP1-TH51

For low frequency power amplify
Silicon NPN Epitaxial

AEC-Q101 Compliance

DESCRIPTION

INC5002AP1 is a silicon NPN epitaxial transistor designed for relay drive or Power supply application.

FEATURE

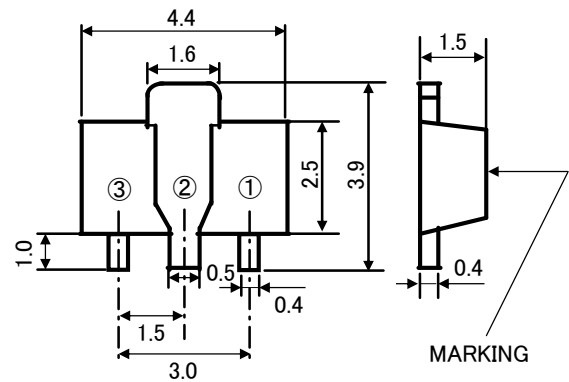
- Small package for easy mounting.
- High voltage $V_{CE0}=60V$
- High collector current $I_C=3A$
- Low $V_{CE(sat)}$ $V_{CE(sat)}=0.6V$ max (@ $I_C=3A$ / $I_B=300mA$)
- High collector dissipation $P_C=500mW$

APPLICATION

DC·DC converter, Relay drive, Motor drive

OUTLINE DRAWING

UNIT: mm



TERMINAL CONNECTOR

- ①: BASE
②: COLLECTOR
③: EMITTER

JEITA: SC-62

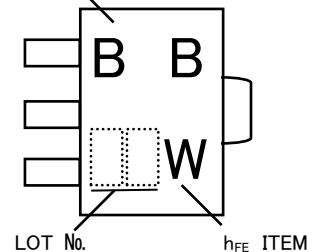
JEDEC: SOT-89

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

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($T_a=25^{\circ}C$)	500	mW
T_j	Junction temperature	+150	$^{\circ}C$
T_{stg}	Storage temperature	-55~+150	$^{\circ}C$

MARKING

Type Name



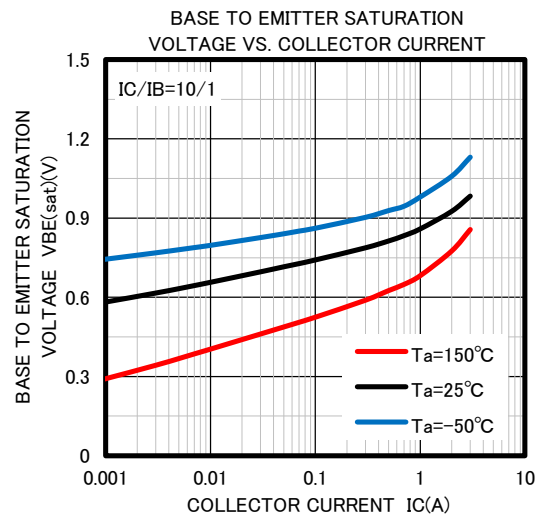
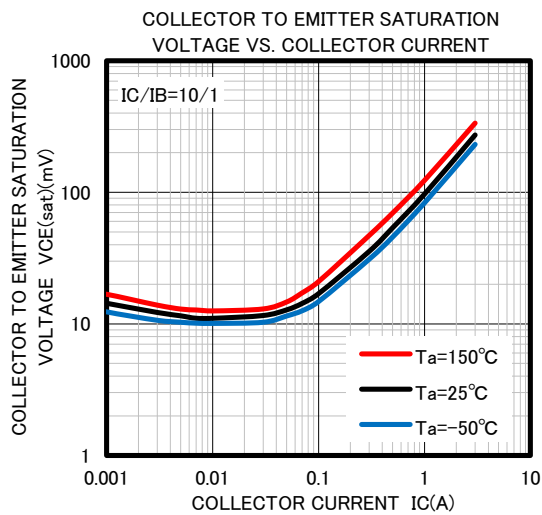
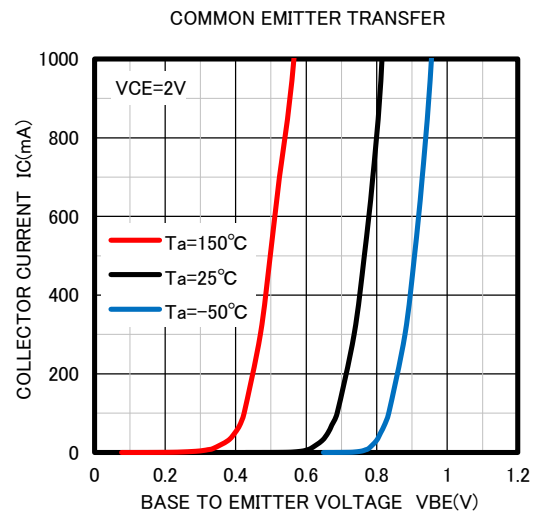
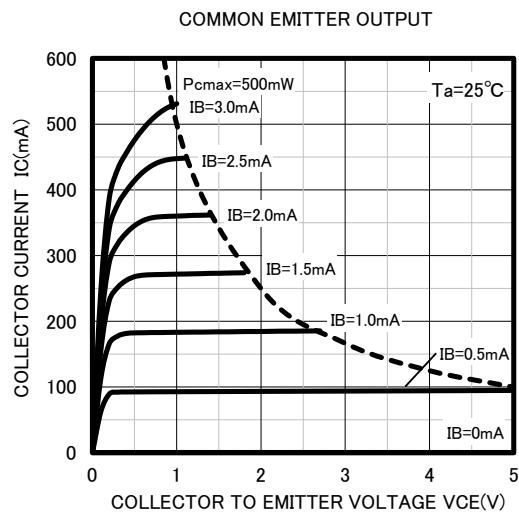
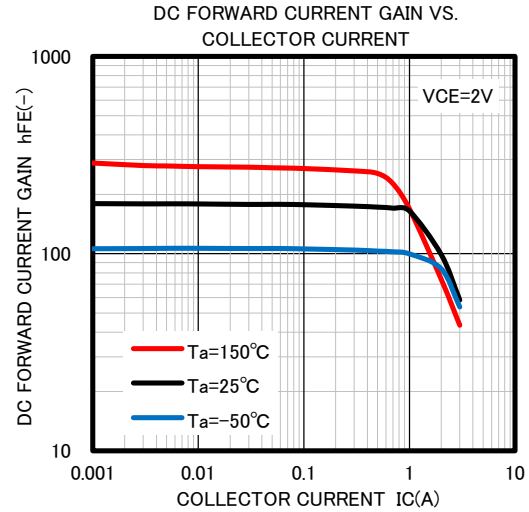
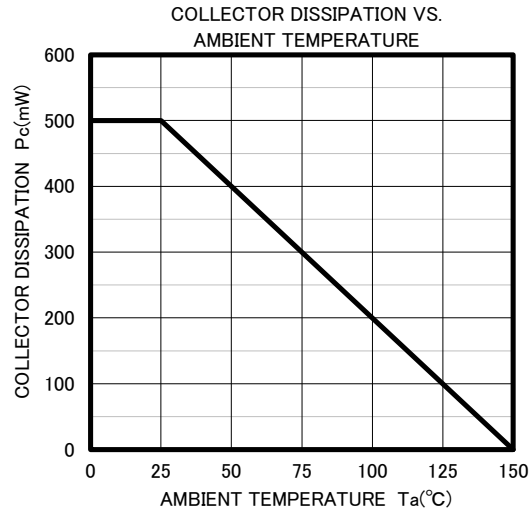
ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}C$)

SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
$V_{(BR)CBO}$	C to B breakdown voltage	$I_C=100\mu A$, $I_E=0mA$	80	-	-	V
$V_{(BR)EBO}$	E to B breakdown voltage	$I_E=100\mu A$, $I_C=0mA$	6	-	-	V
$V_{(BR)CEO}$	C to E breakdown voltage	$I_C=1mA$, $R_{BE}=\infty$	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	$I_C=3A$, $I_B=300mA$	-	-	0.6	V
f_T	Gain band width product	$V_{CE}=5V$, $I_E=-100mA$	-	200	-	MHz
C_{ob}	Collector output capacitance	$V_{CB}=10V$, $I_E=0mA$, $f=1MHz$	-	15	-	pF

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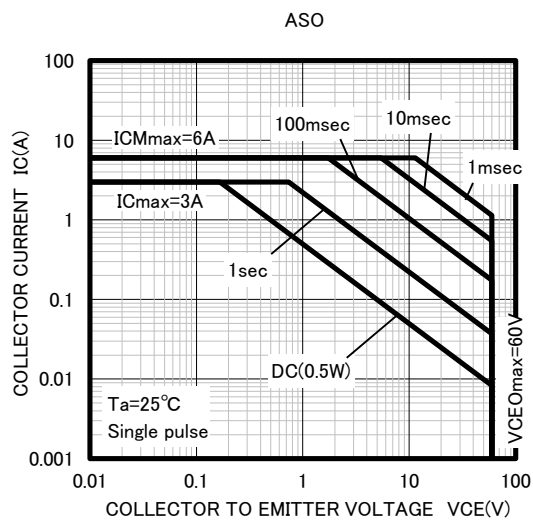
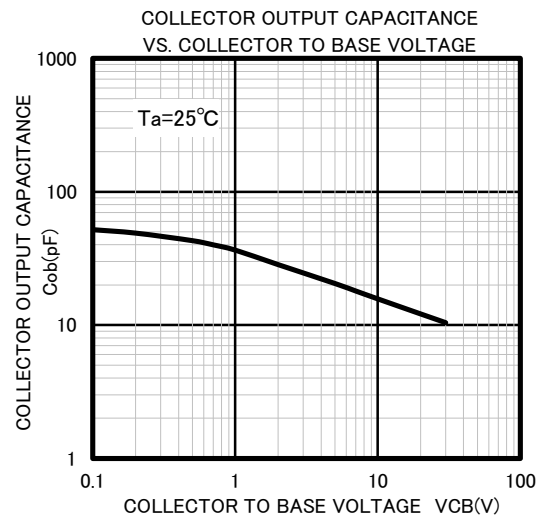
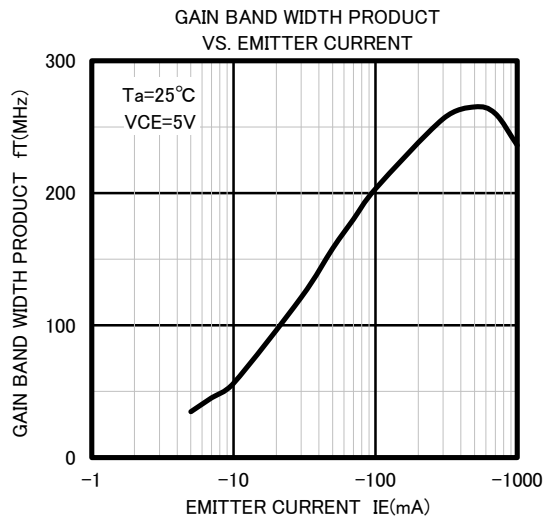
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TYPICAL CHARACTERISTICS



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