

# INC2001AX SERIES

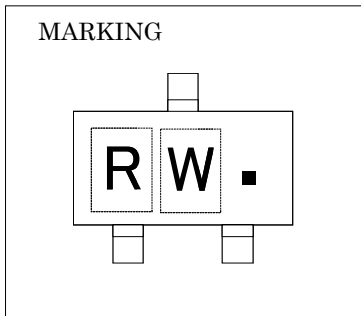
FOR MUTING APPLICATION  
SILICON NPN EPITAXIAL TYPE

## FEATURE

- Small package for easy mounting.
- High reverse hFE
- Small collector to emitter saturation voltage.  
VCE(sat)=40mV(TYP.)(@IC=50mA/IB=2.5mA)
- Low on Resistance  
Ron=0.65Ω(TYP.)(@IB=5mA)

## APPLICATION

muting circuit , switching circuit



## OUTLINE DRAWING

Unit : mm

INC2001AT2 (PRELIMINARY)	INC2001AM1
<p>JEITA, JEDEC : — ISAHAYA : T-USM</p> <p>TERMINAL CONNECTOR ① : BASE ② : EMITTER ③ : COLLECTOR</p>	<p>JEITA : SC-70 JEDEC : —</p> <p>TERMINAL CONNECTOR ① : BASE ② : EMITTER ③ : COLLECTOR</p>
<p>JEITA : SC-75A JEDEC : —</p> <p>TERMINAL CONNECTOR ① : BASE ② : EMITTER ③ : COLLECTOR</p>	<p>JEITA : SC-59 JEDEC : Similar to TO-236</p> <p>TERMINAL CONNECTOR ① : BASE ② : EMITTER ③ : COLLECTOR</p>

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FOR MUTING APPLICATION  
SILICON NPN EPITAXIAL TYPE

## MAXIMUM RATING (Ta=25°C)

SYMBOL	PARAMETER	RATING				UNIT
		INC2001AT2	INC2001AU1	INC2001AM1	INC2001AC1	
V <sub>CBO</sub>	Collector to Base voltage	40				V
V <sub>EBO</sub>	Emitter to Base voltage	40				V
V <sub>CEO</sub>	Collector to Emitter voltage	20				V
I <sub>C</sub>	Collector current	600				mA
P <sub>C</sub>	Collector dissipation (Ta=25°C)	125(※)	150	200		mW
T <sub>j</sub>	Junction temperature	+125	+150			°C
T <sub>stg</sub>	Storage temperature	-55~+125		-55~+150		°C

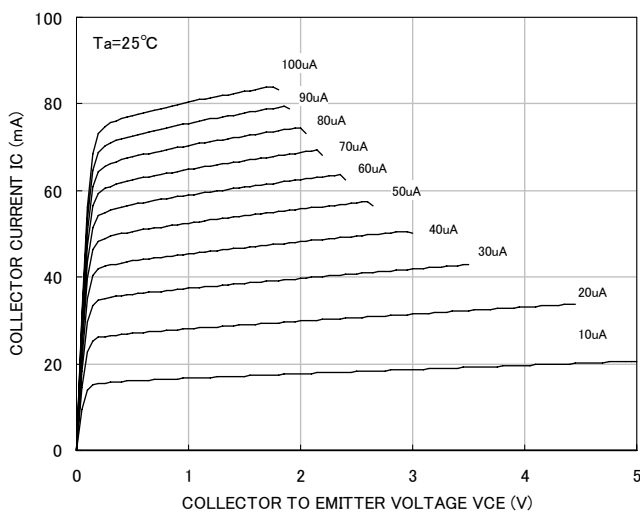
## ELECTRICAL CHARACTERISTICS (Ta=25°C)

※package mounted on 9mm × 19mm × 1mm glass-epoxy substrate.

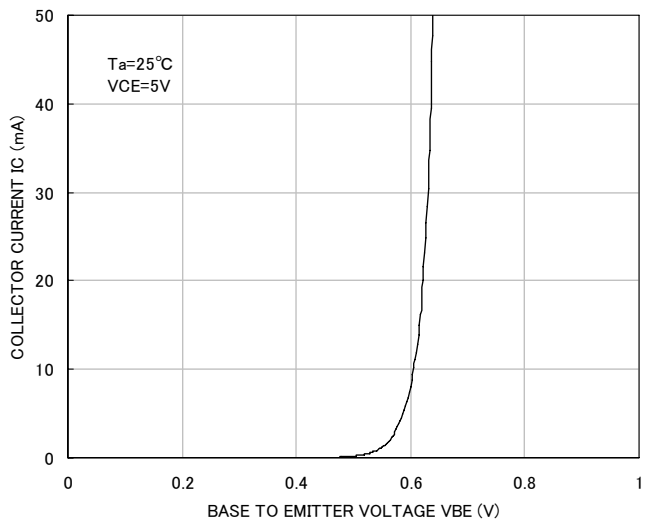
SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
V <sub>(BR)CBO</sub>	C to B break down voltage	I <sub>C</sub> =50 μA, I <sub>E</sub> =0mA	40			V
V <sub>(BR)EBO</sub>	E to B break down voltage	I <sub>E</sub> =50 μA, I <sub>C</sub> =0mA	40			V
V <sub>(BR)CEO</sub>	C to E break down voltage	I <sub>C</sub> =1mA, R <sub>BE</sub> =∞	20			V
I <sub>CBO</sub>	Collector cut off current	V <sub>CB</sub> =40V, I <sub>E</sub> =0mA			0.5	μA
I <sub>EBO</sub>	Emitter cut off current	V <sub>EB</sub> =40V, I <sub>C</sub> =0mA			0.5	μA
h <sub>FE</sub>	DC forward current gain	V <sub>CE</sub> =5V, I <sub>C</sub> =10mA	820		2500	—
V <sub>CE(sat)</sub>	C to E saturation voltage	I <sub>C</sub> =50mA, I <sub>B</sub> =2.5mA		40	150	mV
f <sub>T</sub>	Gain band width product	V <sub>CE</sub> =10V, I <sub>E</sub> =-10mA, f=100MHz		50		MHz
C <sub>ob</sub>	Collector output capacitance	V <sub>CB</sub> =10V, I <sub>E</sub> =0A, f=1MHz		5.0		pF
R <sub>ON</sub>	Output "ON" resistance	I <sub>B</sub> =5mA, R <sub>L</sub> =1kΩ		0.65		Ω

## TYPICAL CHARACTERISTICS

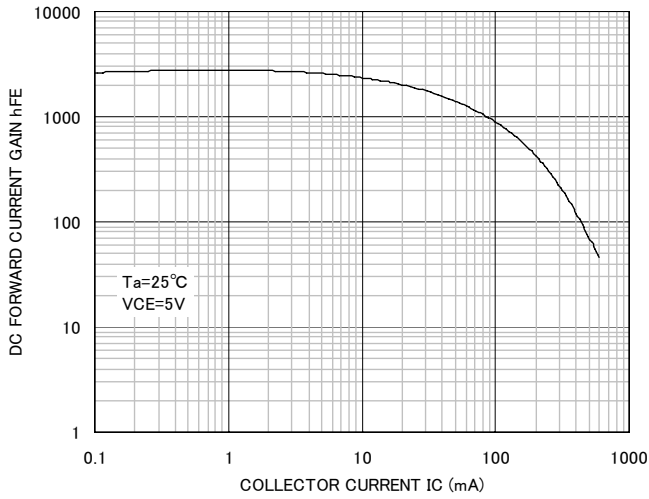
COMMON EMITTER OUTPUT



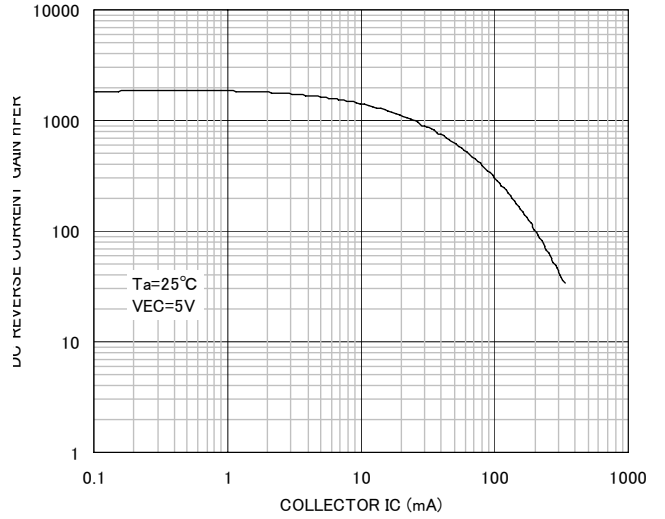
COMMON EMITTER TRANSFER



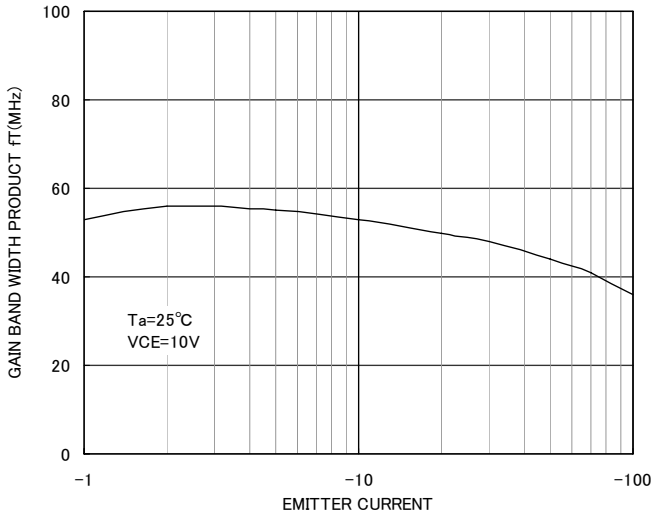
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT



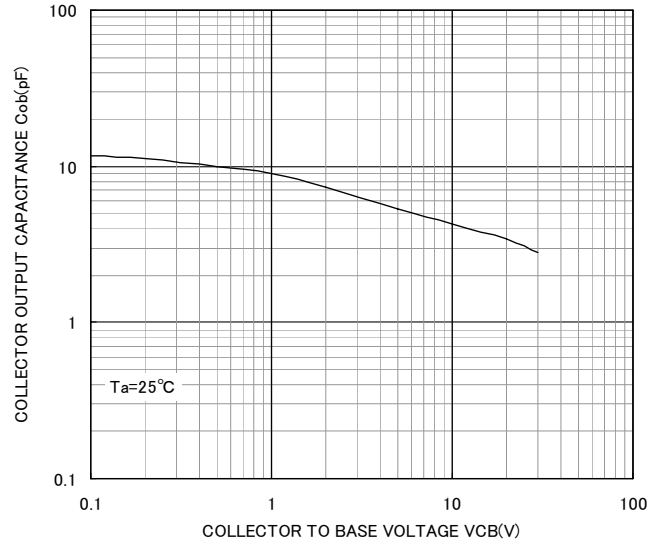
DC REVERSE CURRENT GAIN VS. COLLECTOR CURRENT



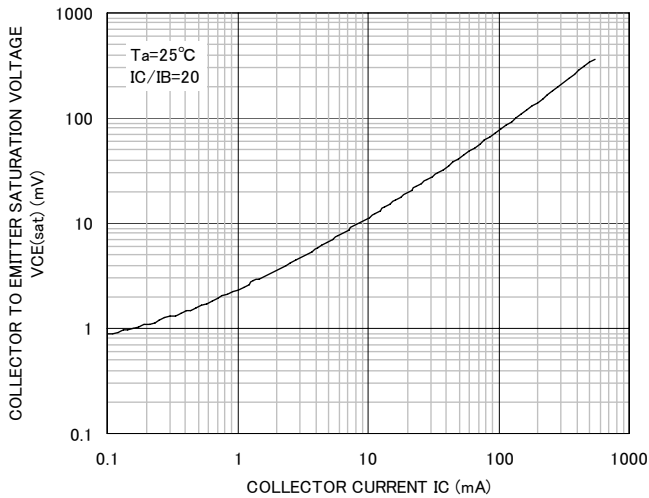
GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT



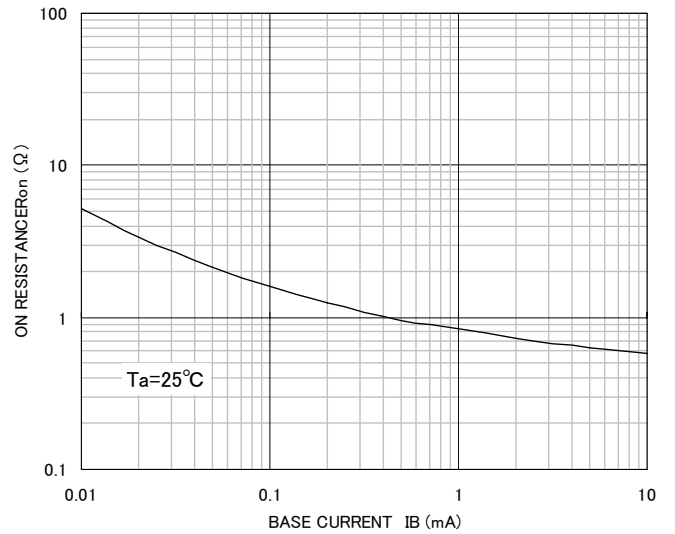
COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT



ON RESISTANCE VS. BASE CURRENT





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