INC1001AC1-T150

FOR GENERAL PURPOSE HIGH CURRENT DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE

AEC-Q101 Compliance

DESCRIPTION

INC1001AC1 is a silicon NPN epitaxial type transistor.
It is designed with high collector current and small $V_{CE(sat)}$.

FEATURE

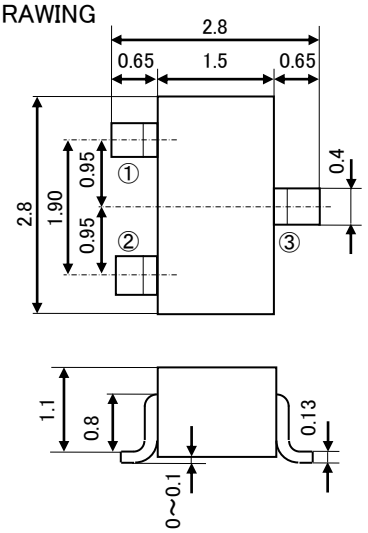
- Super mini package for easy mounting
- High collector current(I_C=500mA)
- Low collector saturation voltage
  ($V_{CE(sat)}$<0.3V_{max}; IC=100mA、IB=10mA)

APPLICATION

For switching, Small type motor drive

OUTLINE DRAWING

UNIT : mm



Terminal Connector
①: Base
②: Emitter
③: Collector

JEITA : SC-59
JEDEC : Similar to TO-236

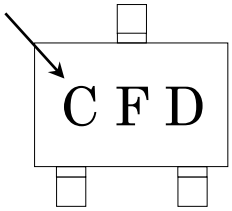
MAXIMUM RATING (Ta=25℃)

SYMBOL	PARAMETER	RATING	UNIT
V_{CBO}	Collector to Base voltage	80	V
V_{EBO}	Emitter to Base voltage	7	V
V_{CEO}	Collector to Emitter voltage	80	V
I_C	Collector current	0.5	A
P_C	Collector dissipation(Ta=25℃)	200	mW
		500(*)	
T_j	Junction temperature	+150	℃
T_{stg}	Storage temperature	−55～+150	℃

*Mounted on glass epoxy board(46mm×19mm×1mm)

MARKING

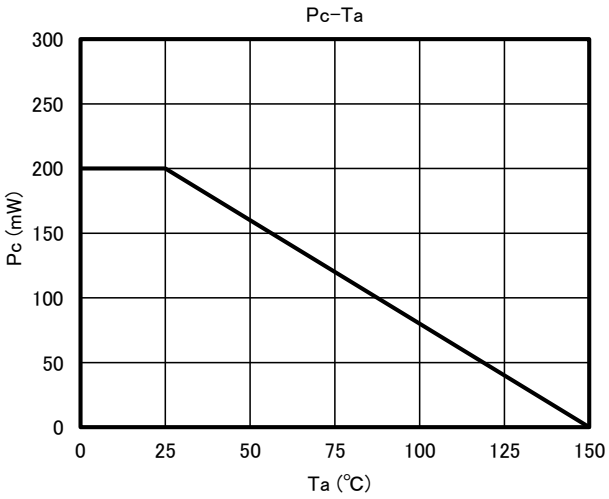
Type Name

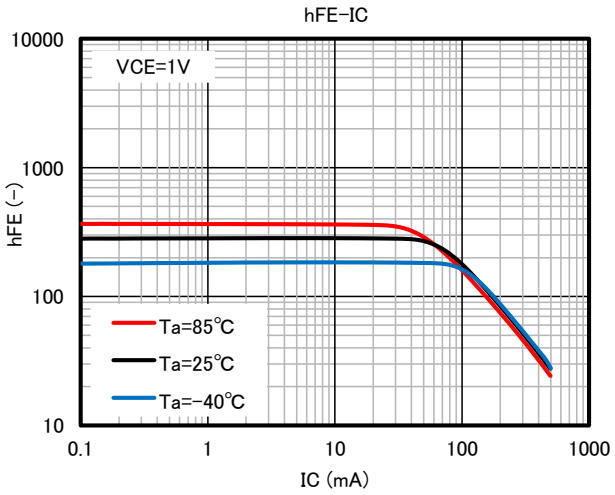


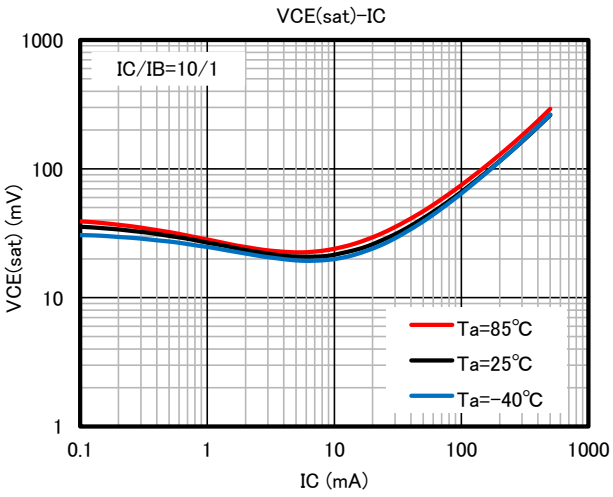
ELECTRICAL CHARACTERISTICS (Ta=25℃)

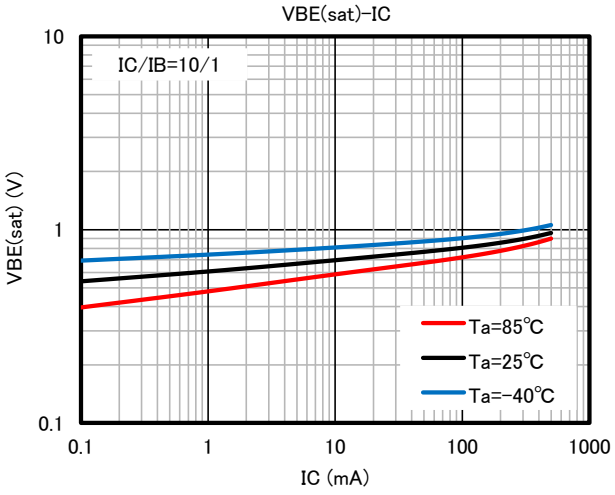
SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
$V_{(BR)CBO}$	C to B breakdown voltage	I_C=100μA, I_E=0	80	−	−	V
$V_{(BR)EBO}$	E to B breakdown voltage	I_E=100μA, I_C=0	7	−	−	V
$V_{(BR)CEO}$	C to E breakdown voltage	I_C=1mA, I_B=0	80	−	−	V
I_{CBO}	Collector cut off current	V_{CB}=80V, I_E=0	−	−	0.15	μA
I_{EBO}	Emitter cut off current	V_{EB}=7V, I_C=0	−	−	0.15	μA
h_{FE1}	DC forward current gain1	VCE=1V, I_C=10mA	105	−	−	−
h_{FE2}	DC forward current gain2	VCE=1V, I_C=100mA	95	−	−	−
$V_{CE(sat)}$	C to E saturation voltage	I_C=100mA, I_B=10mA	−	−	0.3	V
fT	Gain bandwidth product	VCE=2V, I_E=−10mA, f=100MHz	100	−	−	MHz

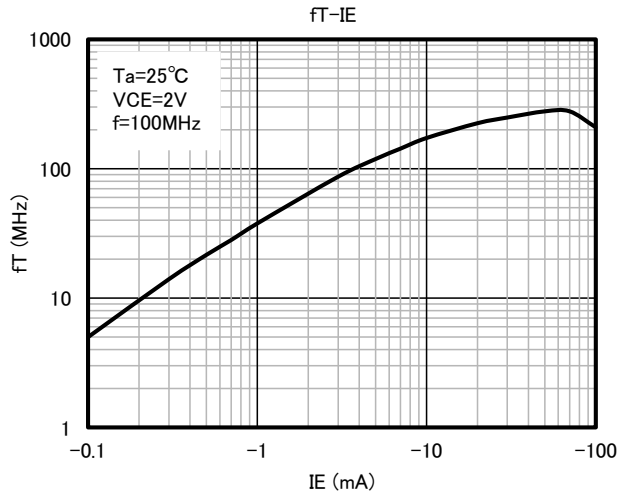
TYPICIAL CHARACTERISTICS

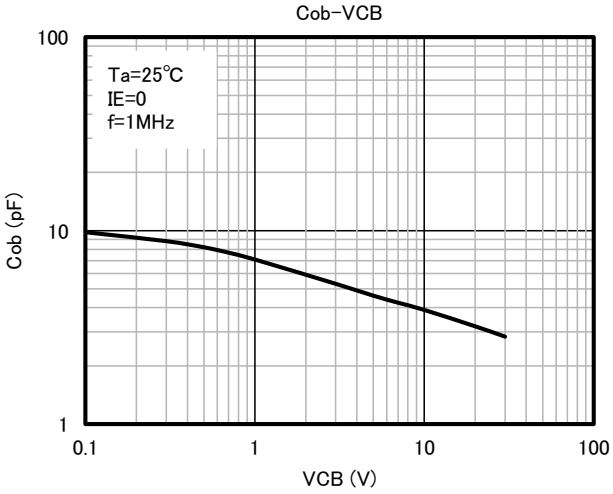


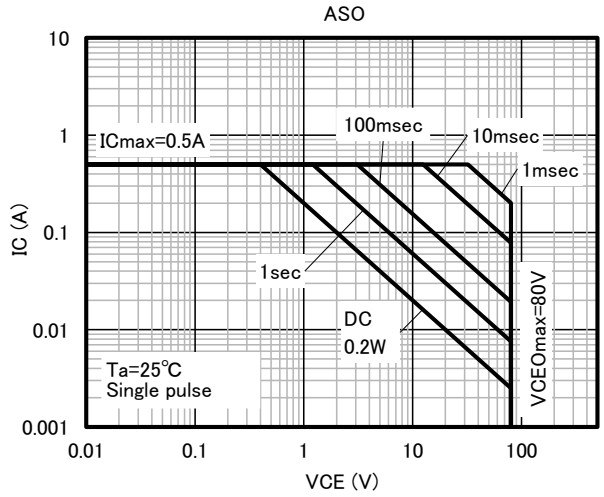







fT-IE
Ta=25℃
VCE=2V
f=100MHz
fT (MHz)
1000
100
10
1
−0.1
−1
−10
−100
IE (mA)


Cob-VCB
Ta=25℃
IE=0
f=1MHz
Cob (pF)
100
10
1
0.1
1
10
100
VCB (V)


ASO
ICmax=0.5A
100msec
10msec
1msec
1sec
DC
0.2W
VCEOmax=80V
Ta=25℃
Single pulse
IC (A)
10
1
0.1
0.01
0.001
0.01
0.1
1
10
100
VCE (V)

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