# INC2002AM1-T150

FOR MUTING APPLICATION
Silicon NPN Epitaxial Type

AEC-Q101 Compliance

## FEATURE

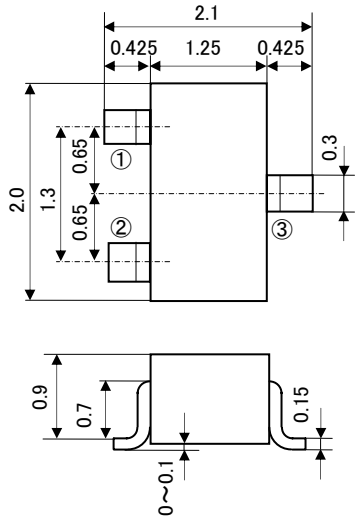
- Small package for easy mounting.
- High reverse $h_{FE}$
- Small collector to emitter saturation voltage.
  $V_{CE(sat)}$=40mV$_{(TYP.)}$ (@$I_C$=50mA/$I_B$=2.5mA)
- Low On-Resistance
  $R_{ON}$=0.65Ω$_{(TYP.)}$ (@$I_B$=5mA)

## APPLICATION

muting circuit , switching circuit

## OUTLINE DRAWING

UNIT : mm



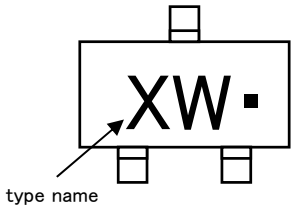

Terminal Connector
①: Base
②: Emitter
③: Collector

JEITA: SC-70
JEDEC: —

## MAXIMUM RATING (Ta=25℃)

| SYMBOL | PARAMETER | RATING | UNIT |
|---|---|---|---|
| $V_{CBO}$ | Collector to Base voltage | 50 | V |
| $V_{CEO}$ | Collector to Emitter voltage | 20 | V |
| $V_{EBO}$ | Emitter to Base voltage | 50 | V |
| $I_C$ | Collector current | 600 | mA |
| $P_C$ | Collector dissipation | 200 | mW |
| $T_j$ | Junction temperature | +150 | ℃ |
| $T_{stg}$ | Storage temperature | −55～+150 | ℃ |

## MARKING

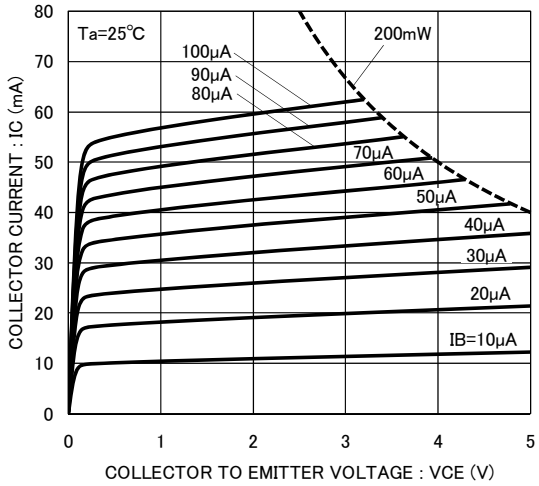



## ELECTRICAL CHARACTERISTICS (Ta=25℃)

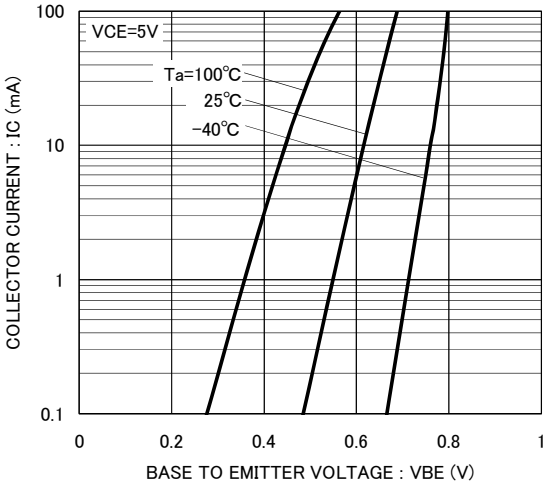
| SYMBOL | PARAMETER | TEST CONDITION | LIMIT | | | UNIT |
|---|---|---|---|---|---|---|
| | | | MIN | TYP | MAX | |
| $V_{(BR)CBO}$ | C to B breakdown voltage | $I_C$=50μA, $I_E$=0mA | 50 | − | − | V |
| $V_{(BR)CEO}$ | C to E breakdown voltage | $I_C$=1mA, $R_{BE}$=∞ | 20 | − | − | V |
| $V_{(BR)EBO}$ | E to B breakdown voltage | $I_E$=50μA, $I_C$=0mA | 50 | − | − | V |
| $I_{CBO}$ | Collector cut off current | $V_{CB}$=50V, $I_E$=0mA | − | − | 0.5 | μA |
| $I_{EBO}$ | Emitter cut off current | $V_{EB}$=50V, $I_C$=0mA | − | − | 0.5 | μA |
| $h_{FE}$ | DC forward current gain | $V_{CE}$=5V, $I_C$=10mA | 820 | − | 2500 | − |
| $V_{CE(sat)}$ | C to E saturation voltage | $I_C$=50mA, $I_B$=2.5mA | − | 40 | 150 | mV |
| $f_T$ | Gain band width product | $V_{CE}$=10V, $I_E$=−10mA, f=100MHz | − | 40 | − | MHz |
| $C_{ob}$ | Collector output capacitance | $V_{CB}$=10V, $I_E$=0A, f=1MHz | − | 4.0 | − | pF |
| $R_{ON}$ | Output On-resistance | $I_B$=5mA | − | 0.65 | − | Ω |

## TYPICAL CHARACTERISTICS

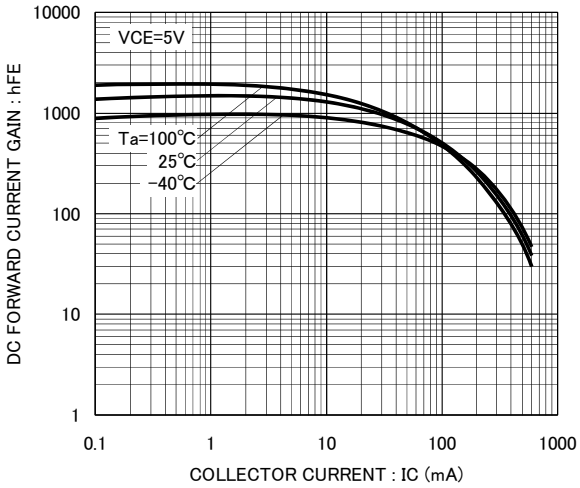
**IC-VCE**



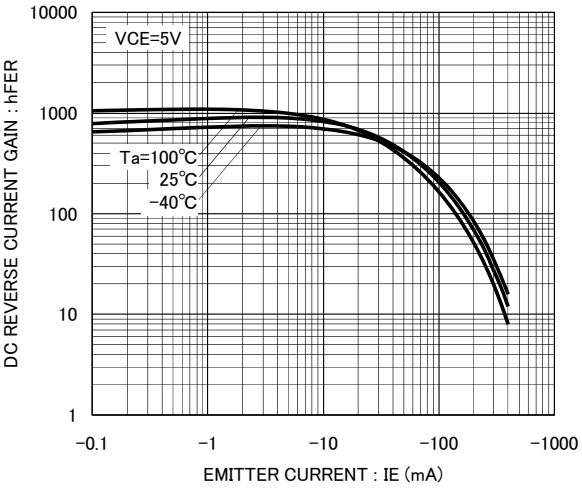

**IC-VBE**



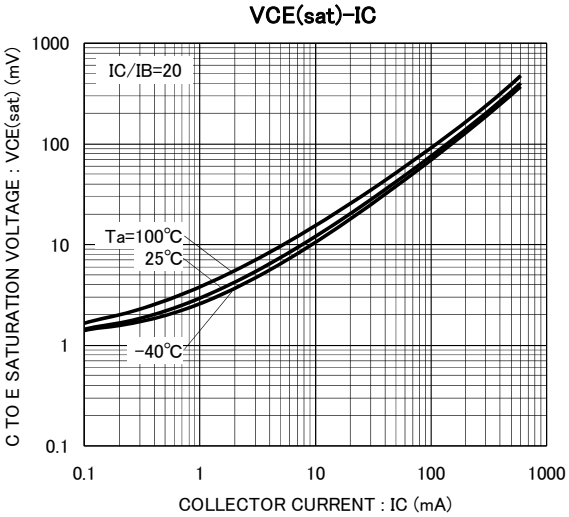

**hFE-IC**



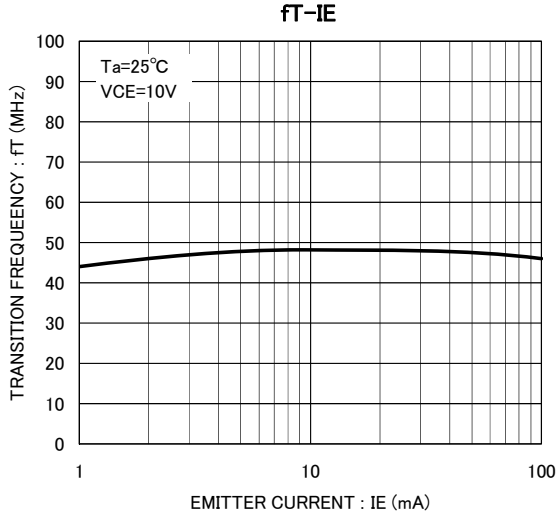

**hFER-IC**



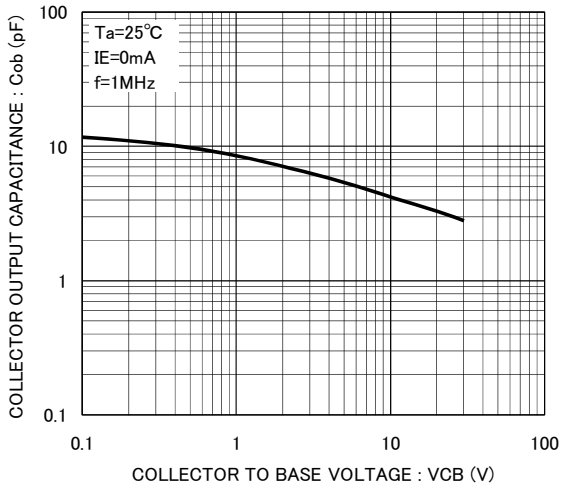

**VCE(sat)-IC**



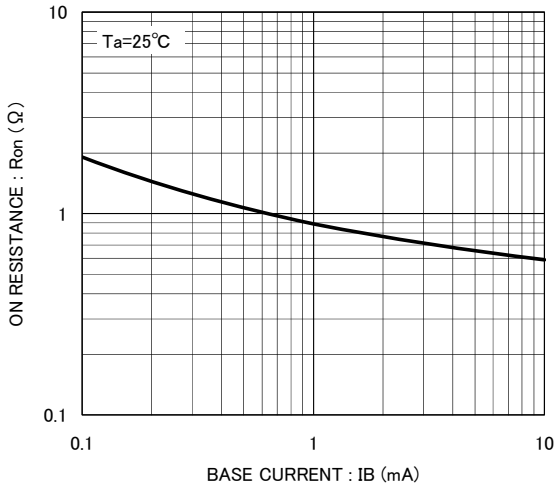

**fT-IE**



**Cob-VCB**




**Ron-IB**



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