# RTE13LFM

Composite Transistor
Zener Diode
Silicon NPN Epitaxial Type

## DESCRIPTION

RTE13LFM is compound transistor built with 2SC3052 chip and 8.2V Zener diode in SC-88 package.

## FEATURE

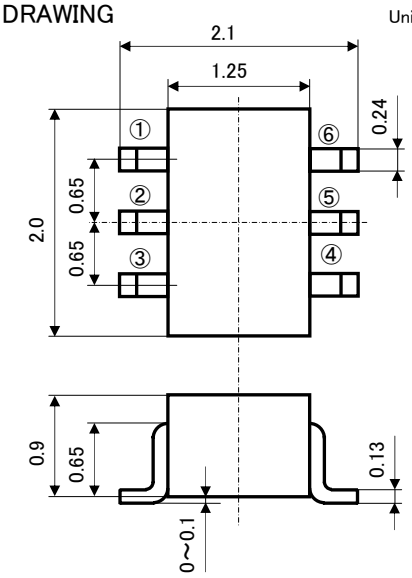
Silicon epitaxial type
Each transistor elements are independent.
Mini package for easy mounting

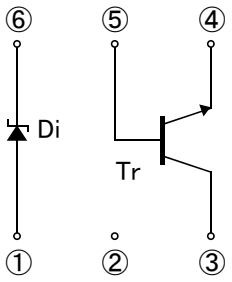
## APPLICATION

Power supply circuit, Driver circuit, etc

## OUTLINE DRAWING

Unit : mm



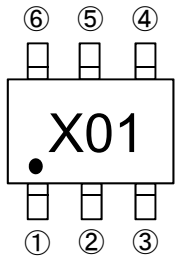

電極接続
①:ANODE
②:NC
③:COLLECTOR
④:EMITTER
⑤:BASE
⑥:CATHODE

JEITA:SC-88
JEDEC:—

## MAXIMUM RATING(Ta=25℃)

| SYMBOL | PARAMETER | RATING | | UNIT |
|---|---|---|---|---|
| $V_{CBO}$ | Collector to Base voltage | Tr | 50 | V |
| $V_{CEO}$ | Collector to Emitter voltage | | 50 | V |
| $V_{EBO}$ | Emitter to Base voltage | | 6 | V |
| $I_C$ | Collector current | | 200 | mA |
| $P_T$ | Total power dissipation(Ta=25℃) | Tr | 150 | mW |
| $T_j$ | Junction temperature | Di | +150 | ℃ |
| $T_{stg}$ | Storage temperature | Common | −55～+150 | ℃ |

## MARKING




## ELECTRICAL CHARACTERISTICS(Ta=25℃)

【 Tr 】

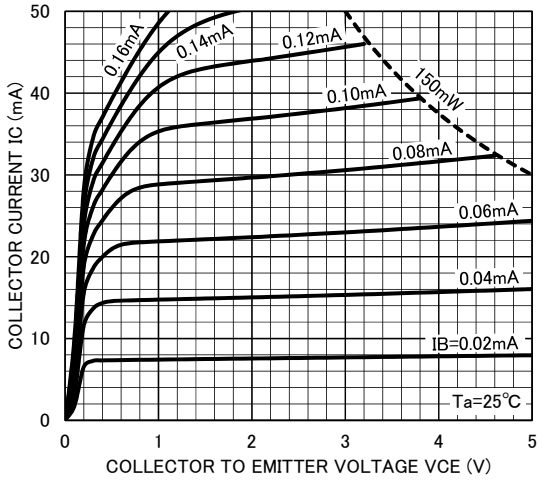
| SYMBOL | PARAMETER | TEST CONDITIONS | LIMITS | | | UNIT |
|---|---|---|---|---|---|---|
| | | | MIN | TYP | MAX | |
| $V_{(BR)CEO}$ | Collector to Emitter break down voltage | $I_C$=100μA, $R_{BE}$=∞ | 50 | − | − | V |
| $I_{CBO}$ | Collector cut off current | $V_{CB}$=50V, $I_E$=0A | − | − | 0.1 | μA |
| $I_{EBO}$ | Emitter cut off current | $V_{EB}$=6V, $I_C$=0A | − | − | 0.1 | μA |
| $h_{FE}$ | DC forward current gain | $V_{CE}$=6V, $I_C$=1mA | 250 | − | 500 | − |
| $h_{FE}$ | DC forward current gain | $V_{CE}$=6V, $I_C$=0.1mA | 90 | − | − | − |
| $V_{CE(sat)}$ | Collector to Emitter saturation voltage | $I_C$=100mA, $I_B$=10mA | − | − | 0.3 | V |
| $f_T$ | Gain band width product | $V_{CE}$=6V, $I_E$=−10mA | − | 200 | − | MHz |
| $C_{ob}$ | Collector output capacitance | $V_{CB}$=6V, $I_E$=0A, f=1MHz | − | 2.5 | − | pF |

【 Di 】

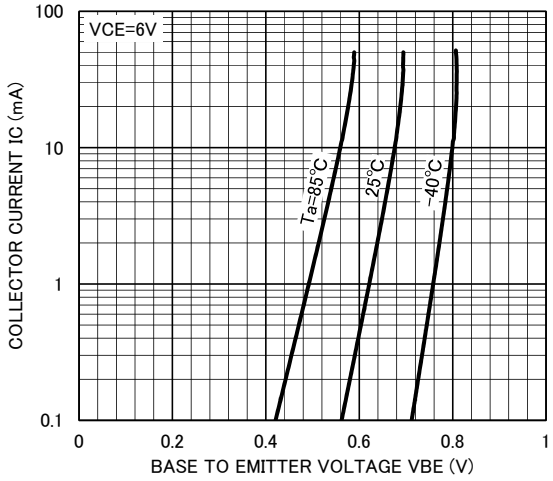
| Zener voltage $V_Z$(V) | | | Reverse current $I_R$(μA) | |
|---|---|---|---|---|
| MIN | MAX | $I_Z$(mA) | MAX | $V_R$(V) |
| 7.790 | 8.610 | 5 | 0.5 | 6.5 |

【Tr】TYPICAL CHARACTERISTICS

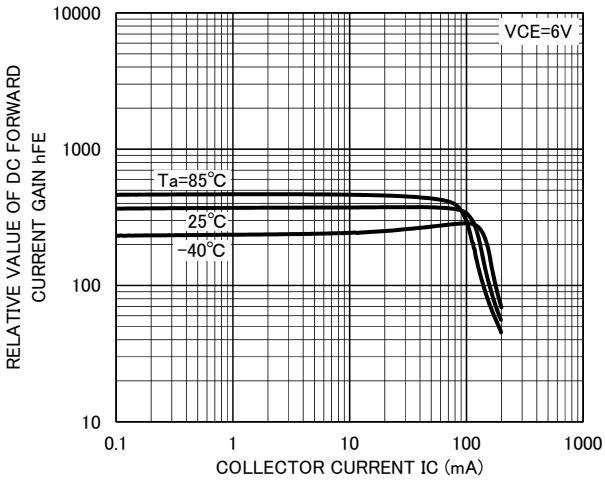
COMMON EMITTER OUTPUT



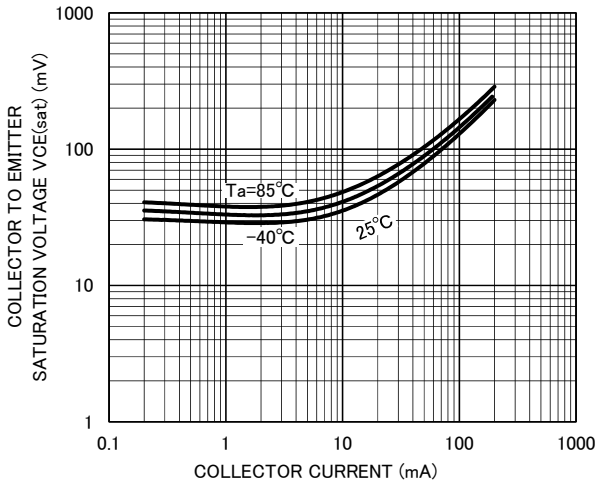

COMMON EMITTER TRANSFER



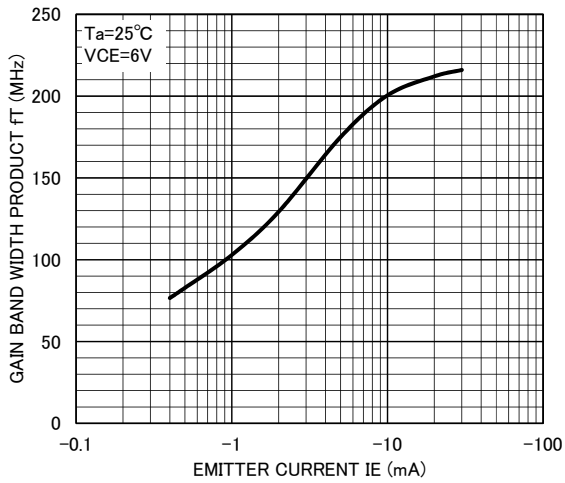

hFE-IC



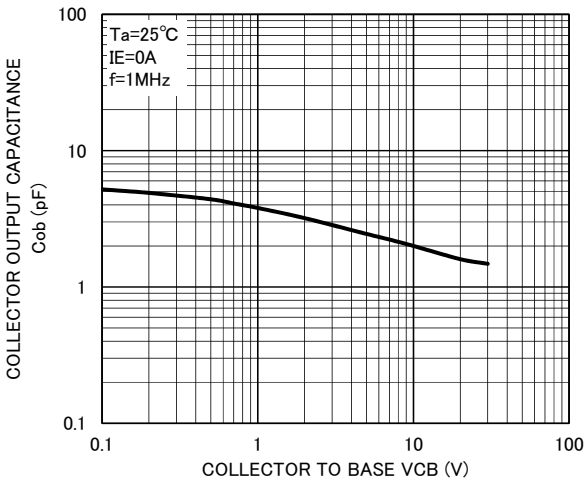

VCE(sat)-IC




fT-IE

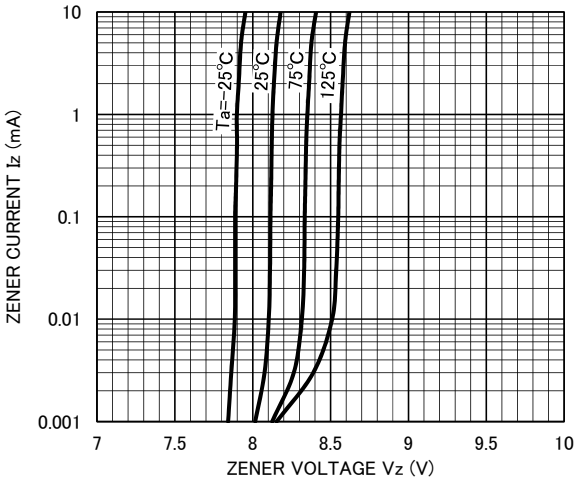



Cob-VCB

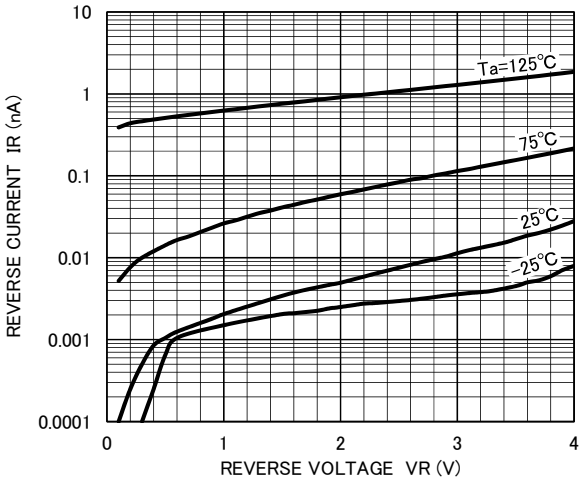


【Di】TYPICAL CHARACTERISTICS

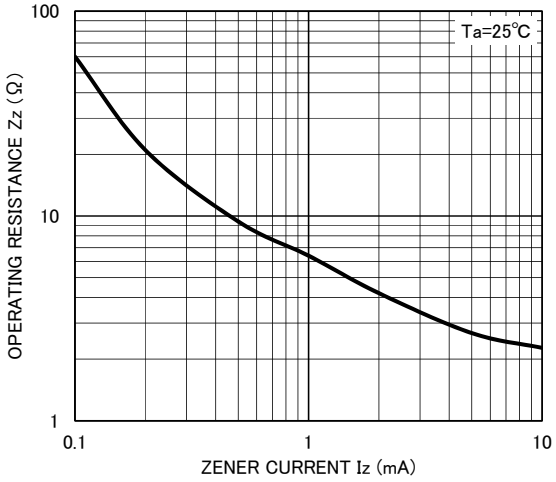
Iz–Vz



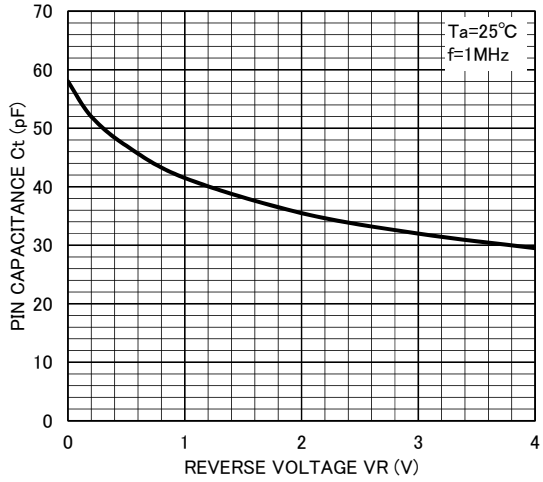

IR–VR




Zz–Iz




Ct–VR



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