RTAN230M-T150

Transistor With Resistor
For Muting Application
Silicon NPN Epitaxial Type

AEC-Q101 Compliance

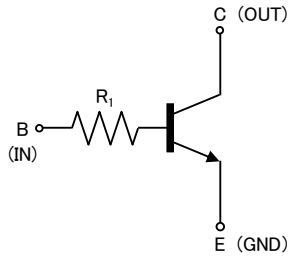
FEATURE

- Built-in bias resistor(R_1=2.2kΩ).
- Small package for easy mounting.
- High reverse h_{FE}.
- Small collector to emitter saturation voltage.
  $V_{CE(sat)}$=10mV$_{(TYP.)}$(@I_C=10mA/I_B=0.5mA)
- Low on Resistor.
  R_{ON}=0.70Ω$_{(TYP.)}$(@V_I=5V)

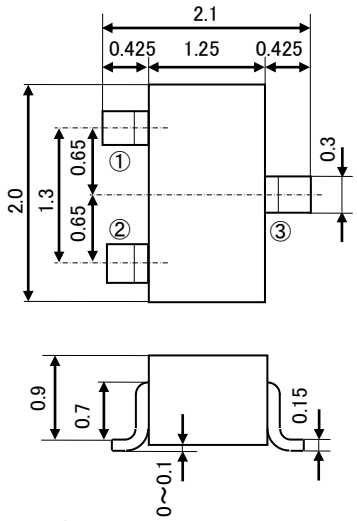
APPLICATION

Inverted circuit, switching circuit, interface circuit, driver circuit.

Equivalent circuit



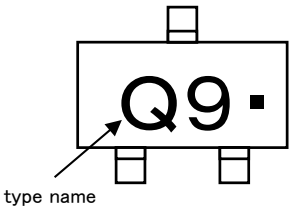
OUTLINE DRAWING UNIT : mm



Terminal Connector
①: Base
②: Emitter
③: Collector

JEITA : SC-70
JEDEC : —

MARKING



MAXIMUM RATING(Ta=25℃)

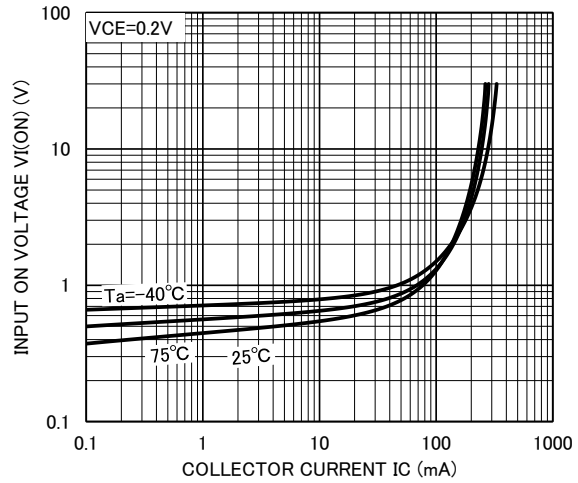
SYMBOL	PARAMETER	RATING	UNIT
V_{CBO}	Collector to Base voltage	40	V
V_{EBO}	Emitter to Base voltage	40	V
V_{CEO}	Collector to Emitter voltage	20	V
I_C	Collector current	400	mA
P_C	Collector dissipation	200	mW
T_j	Junction temperature	+150	℃
T_{stg}	Storage temperature	−55～+150	℃

ELECTRICAL CHARACTERISTICS(Ta=25℃)

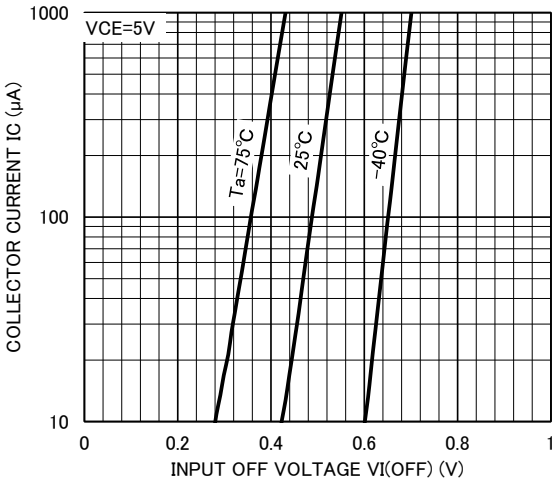
SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
$V_{(BR)CBO}$	C to B breakdown voltage	I_C=50μA, I_E=0mA	40	−	−	V
$V_{(BR)EBO}$	E to B breakdown voltage	I_E=50μA, I_C=0mA	40	−	−	V
$V_{(BR)CEO}$	C to E breakdown voltage	I_C=1mA, R_{BE}=∞	20	−	−	V
I_{CBO}	Collector cut off current	V_{CB}=40V, I_E=0mA	−	−	0.5	μA
I_{EBO}	Emitter cut off current	V_{EB}=40V, 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=10mA, I_B=0.5mA	−	10	−	mV
R_1	Input resistor	−	1.54	2.2	2.86	kΩ
f_T	Gain band width product	V_{CE}=10V, I_E=−10mA, f=100MHz	−	40	−	MHz
R_{ON}	Output "ON" resistor	V_I=5V, R_L=1kΩ	−	0.70	−	Ω

TYPICAL CHARACTERISTICS

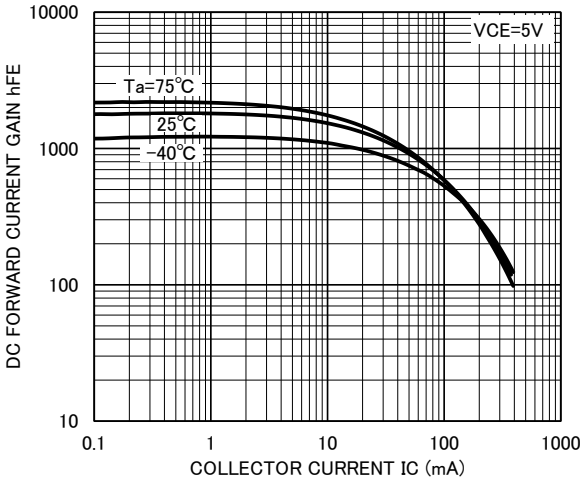
VI(ON)-IC



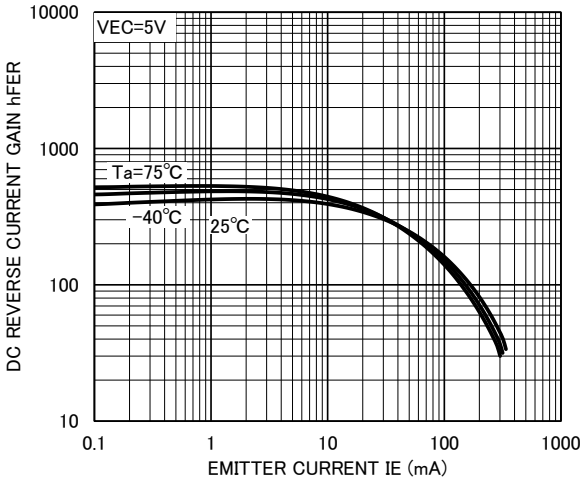
IC-VI(OFF)



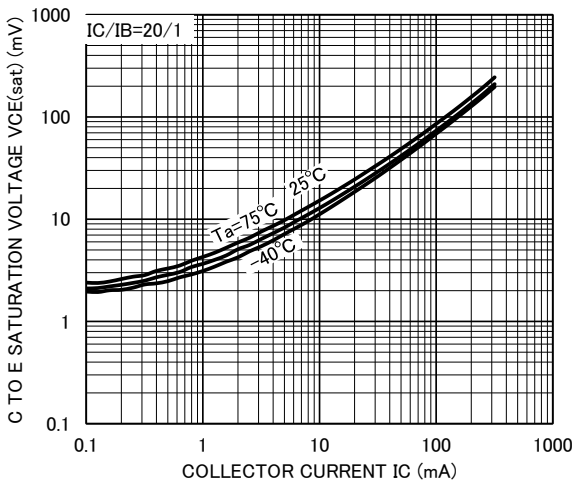
hFE-IC



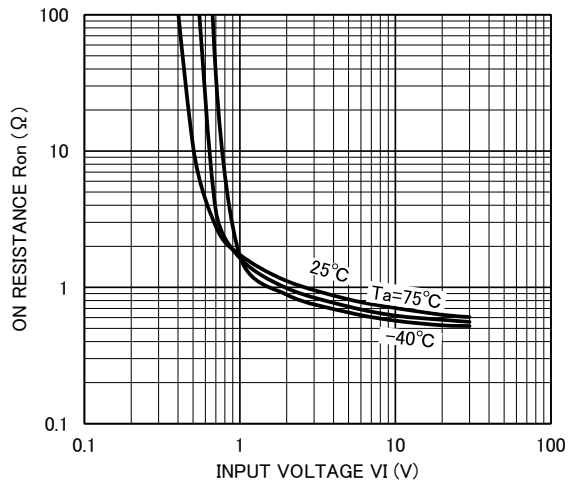
hFER-IE



VCE(sat)-IC



Ron-VI



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