

RT1N151M-T150

Transistor With Resistor
For Switching Application
Silicon NPN Epitaxial Type

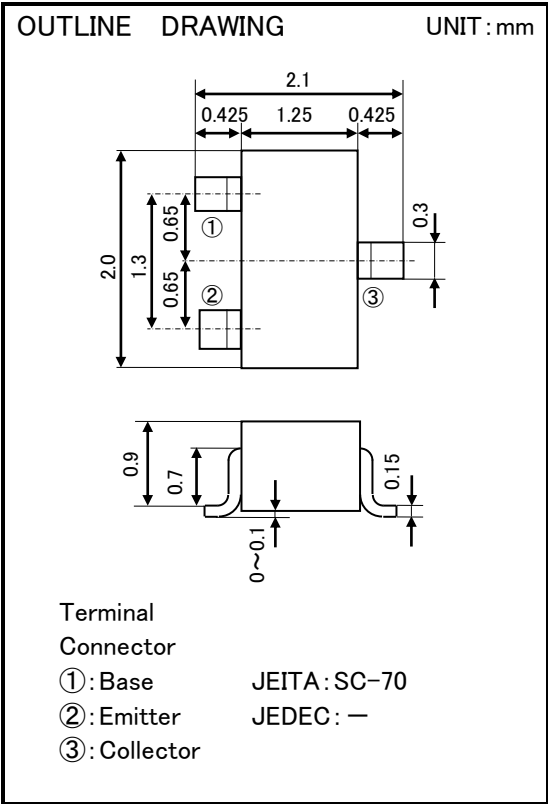
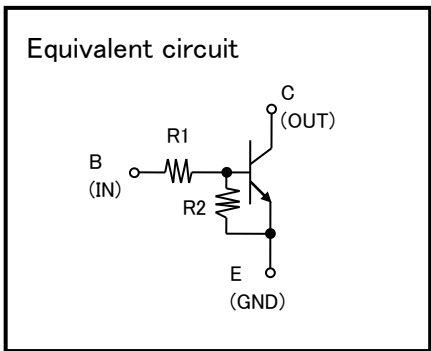
AEC-Q101 Compliance

FEATURE

- Built-in bias resistor ($R1=100k\Omega$, $R2=100k\Omega$)
- Mini package for easy mounting

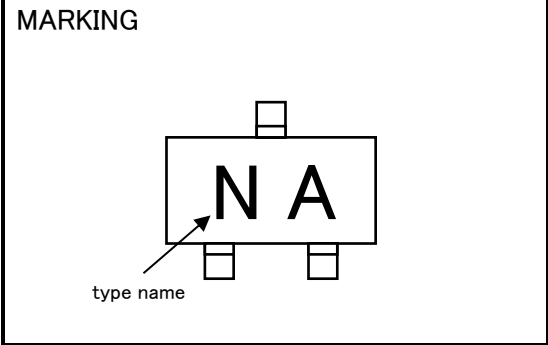
APPLICATION

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



MAXIMUM RATING ($T_a=25^{\circ}\text{C}$)

SYMBOL	PARAMETER	RATING	UNIT
V_{CBO}	Collector to Base voltage	50	V
V_{EBO}	Emitter to Base voltage	10	V
V_{CEO}	Collector to Emitter voltage	50	V
V_{IN}	Input voltage	40	V
I_{C}	Collector current	100	mA
I_{CM}	Peak Collector current	200	mA
P_{C}	Collector dissipation	150	mW
T_{j}	Junction temperature	+150	$^{\circ}\text{C}$
T_{stg}	Storage temperature	-55~+150	$^{\circ}\text{C}$



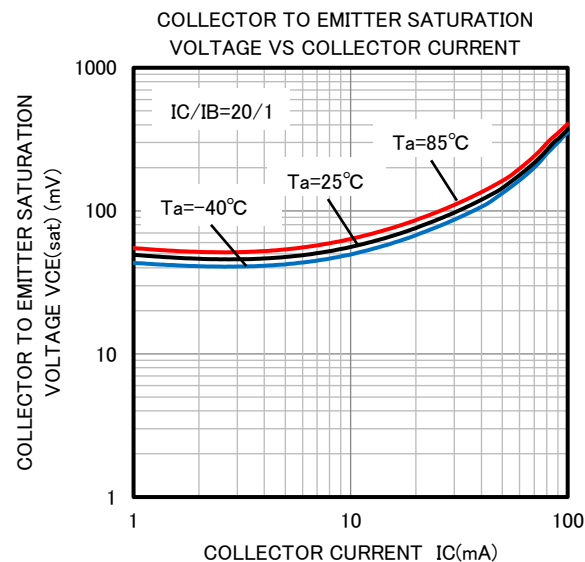
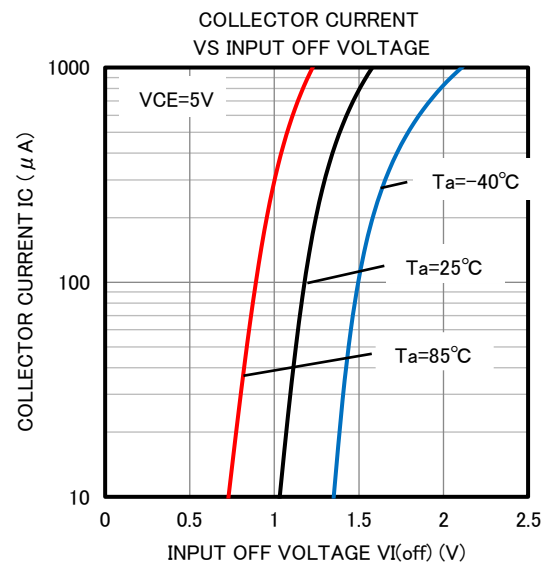
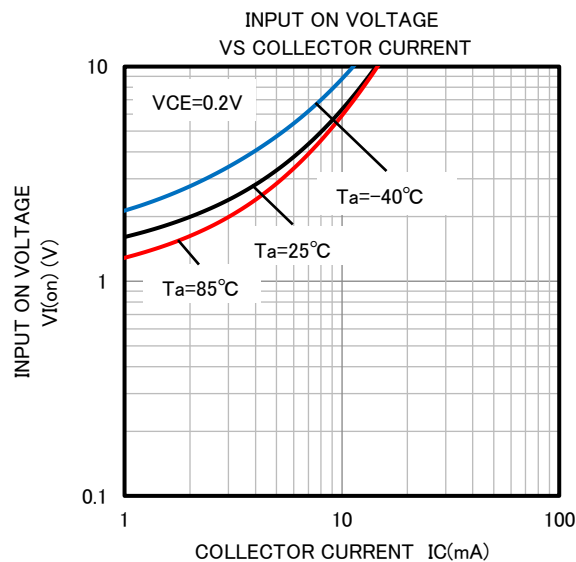
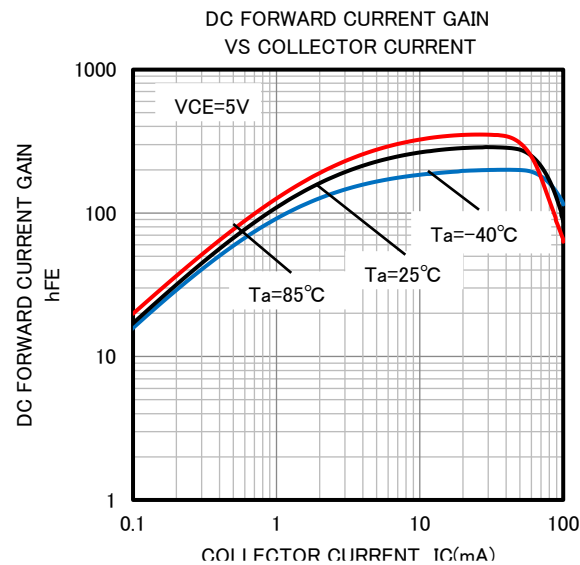
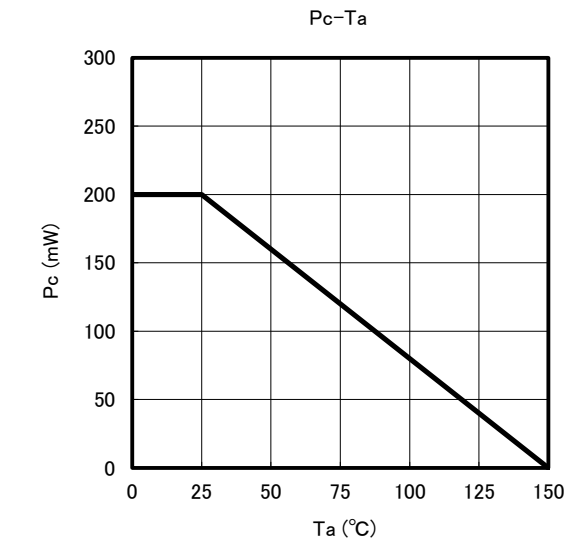
ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$)

SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
$V_{(\text{BR})\text{CEO}}$	C to E breakdown voltage	$I_{\text{C}}=100\mu\text{A}$, $R_{\text{BE}}=\infty$	50	—	—	V
I_{CBO}	Collector cut off current	$V_{\text{CB}}=50\text{V}$, $I_{\text{E}}=0$	—	—	0.1	μA
I_{EBO}	Emitter cut off current	$V_{\text{EB}}=5\text{V}$, $I_{\text{C}}=0$	18.8	25.0	36.3	μA
h_{FE}	DC forward current gain	$V_{\text{CE}}=5\text{V}$, $I_{\text{C}}=5\text{mA}$	82	—	—	—
$V_{\text{CE(sat)}}$	C to E saturation voltage	$I_{\text{C}}=5\text{mA}$, $I_{\text{B}}=0.25\text{mA}$	—	—	0.3	V
$V_{\text{I(ON)}}$	Input on voltage	$V_{\text{CE}}=0.2\text{V}$, $I_{\text{C}}=5\text{mA}$	—	2.4	8.8	V
$V_{\text{I(OFF)}}$	Input off voltage	$V_{\text{CE}}=5\text{V}$, $I_{\text{C}}=100\mu\text{A}$	0.8	1.1	—	V
R1	Input resistor	—	—	100	—	$k\Omega$
R2/R1	Resistor ratio	—	0.8	1.0	1.2	—
f_{T}	Gain band width product	$V_{\text{CE}}=6\text{V}$, $I_{\text{E}}=-10\text{mA}$	—	200	—	MHz

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TYPICAL CHARACTERISTICS



Keep safety first in your circuit designs!

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