

**RT2N20M**

COMPOSITE TRANSISTOR WITH RESISTOR  
FOR SWITCHING APPLICATION  
SILICON NPN EPITAXIAL TYPE

**DESCRIPTION**

RT2N20M is a composite transistor with built-in bias resistor

**FEATURE**

Built-in bias resistor (  $R1=4.7\text{ K}$  )

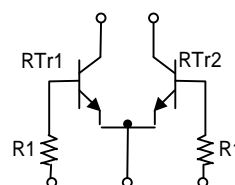
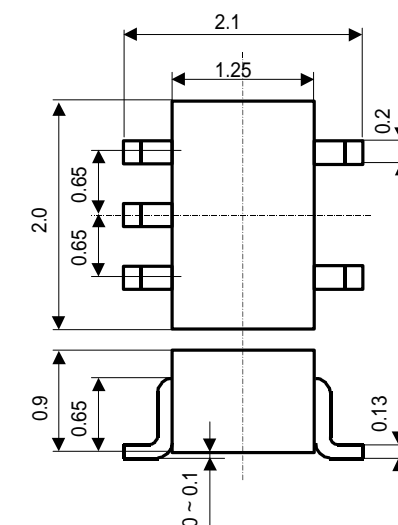
Mini package for easy mounting

**APPLICATION**

Inverted circuit , switching circuit , interface circuit , driver circuit

**OUTLINE DRAWING**

Unit:mm

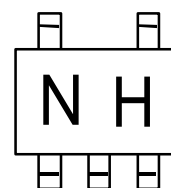
**TERMINAL CONNECTOR**

: BASE1  
: EMITTER (COMMON)  
: BASE2  
: COLLECTOR2  
: COLLECTOR1

JEITA: -  
JEDEC: -

**MAXIMUM RATINGS** ( $T_a=25^\circ\text{C}$ ) (RTr1, RTr2)

Symbol	Parameter	Ratings	Unit
$V_{CBO}$	Collector to Base voltage	50	V
$V_{EBO}$	Emitter to Base voltage	6	V
$V_{CEO}$	Collector to Emitter voltage	50	V
$I_C$	Collector current	100	mA
$I_{CM}$	Peak Collector current	200	mA
$P_C$	Collector dissipation (Total $T_a=25^\circ\text{C}$ )	150	mW
$T_j$	Junction temperature	+ 150	
$T_{stg}$	Storage temperature	-55 ~ + 150	

**MARKING**

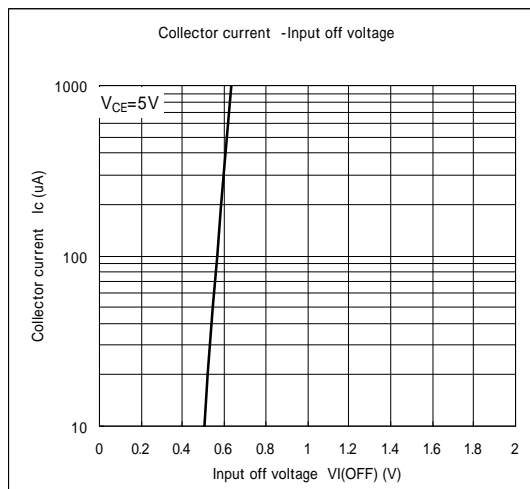
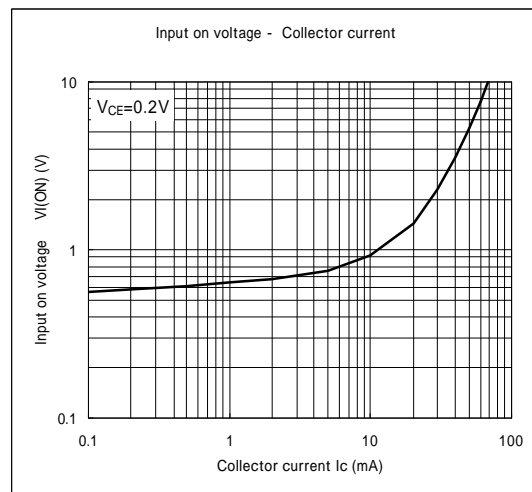
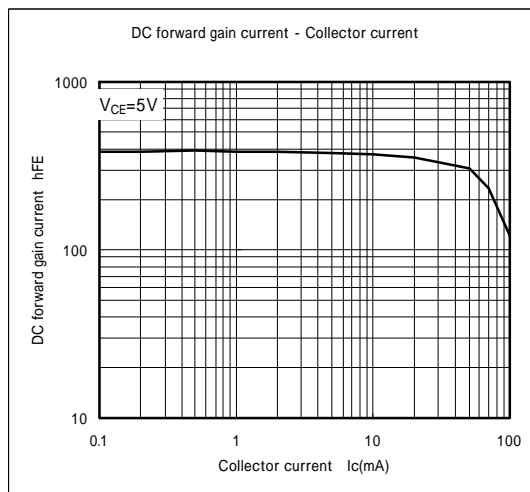
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## ELECTRICAL CHARACTERISTICS (Ta=25 °C)(RT1, RT2)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CBO}$	C to E break down voltage	$I_C=100\mu A, R_{BE}=\infty$	50	-	-	V
$I_{CBO}$	Collector cut off current	$V_{CB}=50V, I_E=0$	-	-	0.1	$\mu A$
$h_{FE}$	DC forward current gain	$V_{CE}=5V, I_C=1mA$	100	-	-	-
$V_{CE(sat)}$	C to E saturation voltage	$I_C=10mA, I_B=0.5mA$	-	0.1	0.3	V
$R_1$	Input resistor		3.3	4.7	6.1	K
$f_T$	Gain band width product	$V_{CE}=6V, I_E=-10mA$		200		MHz

## TYPICAL CHARACTERISTICS (Tr1, Tr2)





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**Keep safety first in your circuit designs!**

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