

# RT3NDDM

Composite Transistor With Resistor  
For Switching Application  
Silicon Epitaxial Type

## DESCRIPTION

RT3NDDM is composite transistor built with two RT1N237 chips in SC-88 package.

## FEATURE

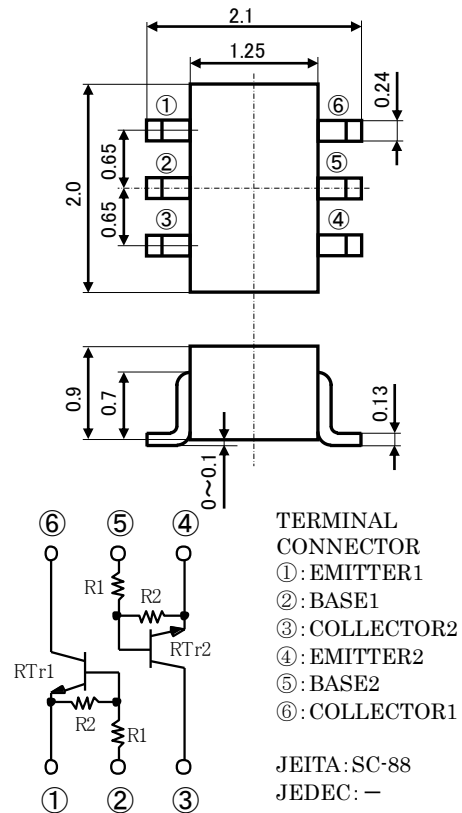
Built-in bias resistor ( $R_1=2.2k\Omega$ ,  $R_2=47k\Omega$ )  
Mini package for easy mounting

## APPLICATION

Inverted circuit, Switching circuit,  
Interface circuit, Driver circuit

## OUTLINE DRAWING

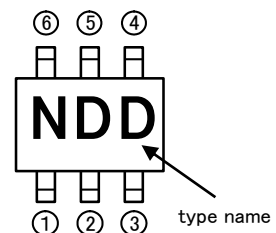
Unit:mm



## MAXIMUM RATING ( $T_a=25^\circ\text{C}$ ) ( $R_{Tr1}$ , $R_{Tr2}$ COMMON)

SYMBOL	PARAMETER	RATING	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
$V_{IN}$	Input voltage	12	V
$I_C$	Collector current	100	mA
$I_{CM}$	Peak Collector current	200	mA
$P_T$	Total dissipation	200	mW
$T_j$	Junction temperature	+150	$^\circ\text{C}$
$T_{stg}$	Storage temperature	-55~+150	$^\circ\text{C}$

## MARKING



## ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ ) ( $R_{Tr1}$ , $R_{Tr2}$ COMMON)

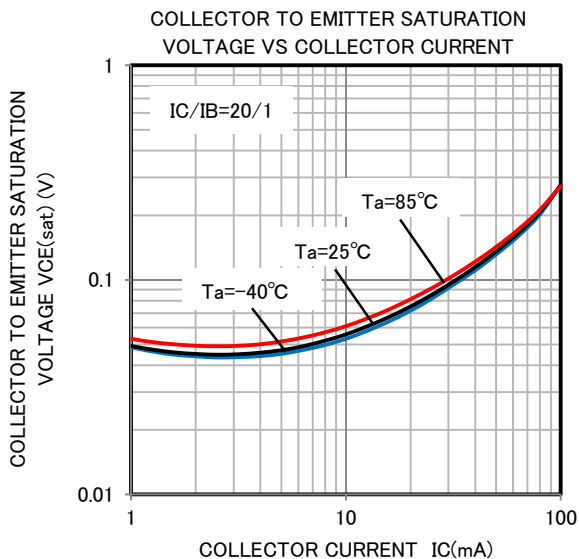
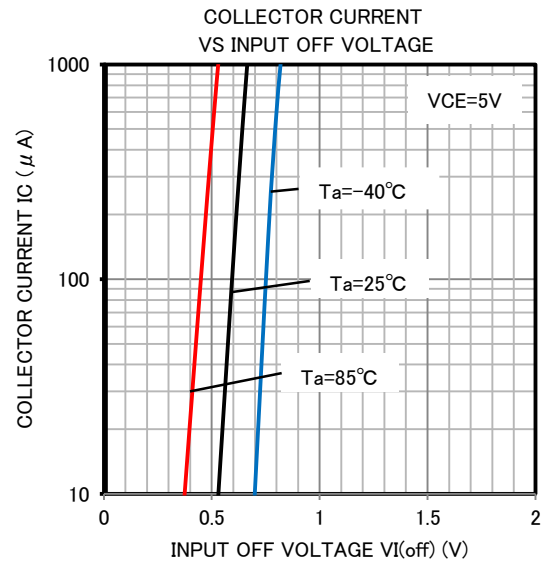
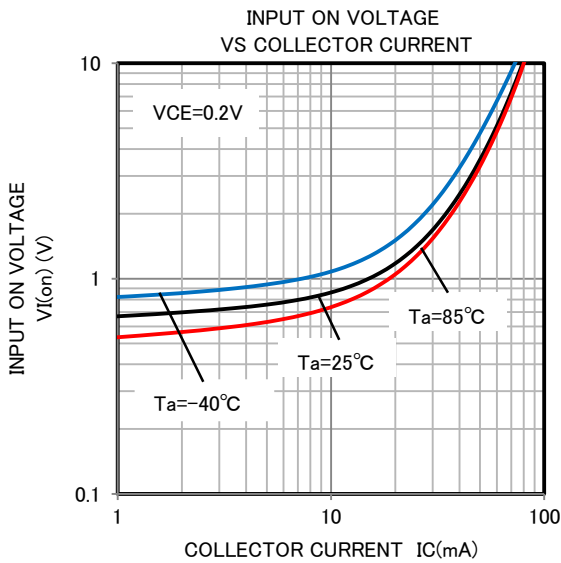
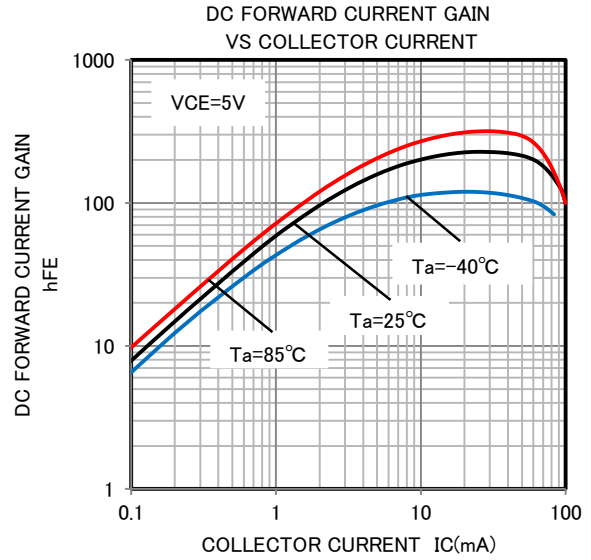
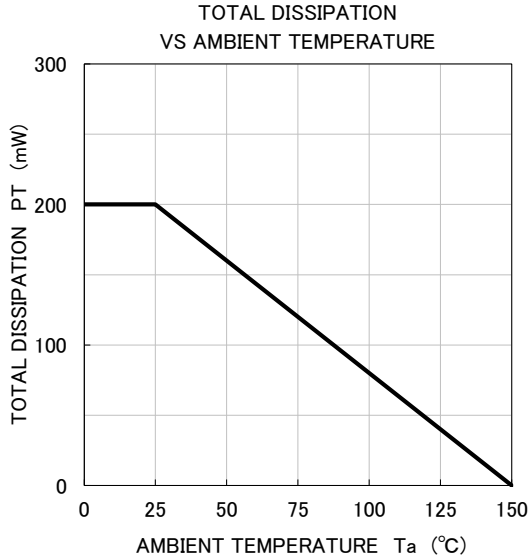
SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
$V_{(BR)CEO}$	Collector to Emitter breakdown voltage	$I_C=100\mu\text{A}$ , $R_{BE}=\infty$	50	-	-	V
$I_{CBO}$	Collector cut off current	$V_{CB}=50\text{V}$ , $I_E=0$	-	-	0.1	$\mu\text{A}$
$I_{EBO}$	Emitter cut off current	$V_{EB}=5\text{V}$ , $I_C=0$	76	102	147	$\mu\text{A}$
$h_{FE}$	DC forward current gain	$V_{CE}=5\text{V}$ , $I_C=10\text{mA}$	80	-	-	-
$V_{CE(sat)}$	Collector to Emitter saturation voltage	$I_C=10\text{mA}$ , $I_B=0.5\text{mA}$	-	-	0.3	V
$V_{I(ON)}$	Input on voltage	$V_{CE}=0.2\text{V}$ , $I_C=5\text{mA}$	-	0.7	1.1	V
$V_{I(OFF)}$	Input off voltage	$V_{CE}=5\text{V}$ , $I_C=100\mu\text{A}$	0.5	0.6	-	V
$R_1$	Input resistor	-	1.5	2.2	2.9	$k\Omega$
$R_2/R_1$	Resistor ratio	-	17	22	26	-
$f_T$	Gain band width product	$V_{CE}=6\text{V}$ , $I_E=10\text{mA}$	-	200	-	MHz

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## TYPICAL CHARACTERISTICS

(RT<sub>r1</sub>, RT<sub>r2</sub> COMMON)



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