

RT3TDDM

Composite Transistor With Resistor
For Switching Application
Silicon Epitaxial Type

DESCRIPTION

RT3TDDM is composite transistor built with RT1N237 chip and RT1P237 chip in SC-88 package.

FEATURE

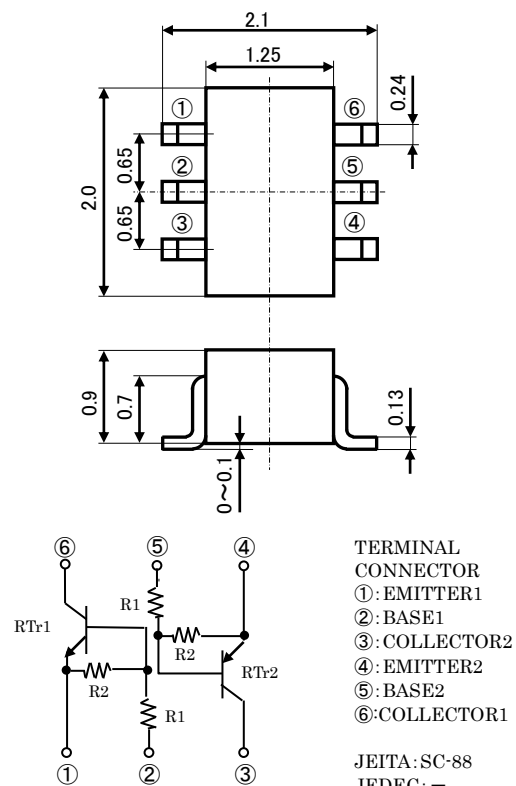
Built-in bias resistor (R1=2.2k Ω , R2=47k Ω)
Mini package for easy mounting

APPLICATION

Inverted circuit, Switching circuit,
Interface circuit, Driver circuit

OUTLINE DRAWING

Unit:mm

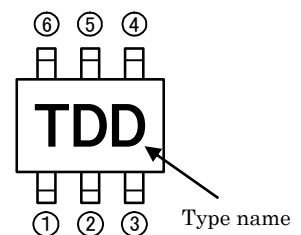


MAXIMUM RATING (Ta=25°C) (RTr1_NPN, RTr2_PNP)

SYMBOL	PARAMETER	RATING	UNIT
V _{CB0}	Collector to Base voltage	50	V
V _{EB0}	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	°C
T _{stg}	Storage temperature	-55~+150	°C

※PNP built in transistor of "—" sign is abbreviation.

MARKING



ELECTRICAL CHARACTERISTICS (Ta=25°C) (RTr1_NPN, RTr2_PNP)

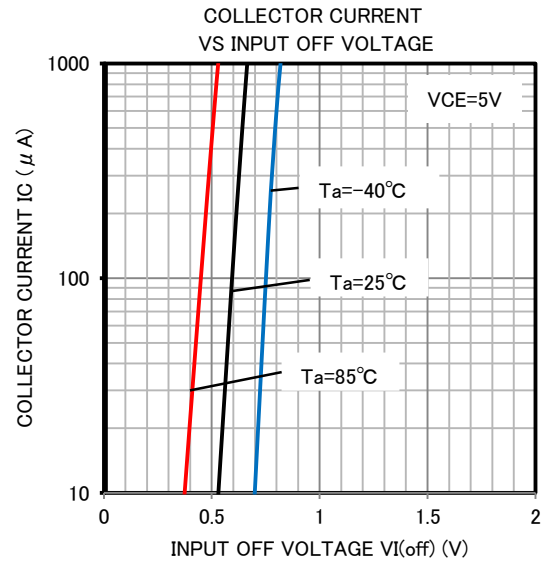
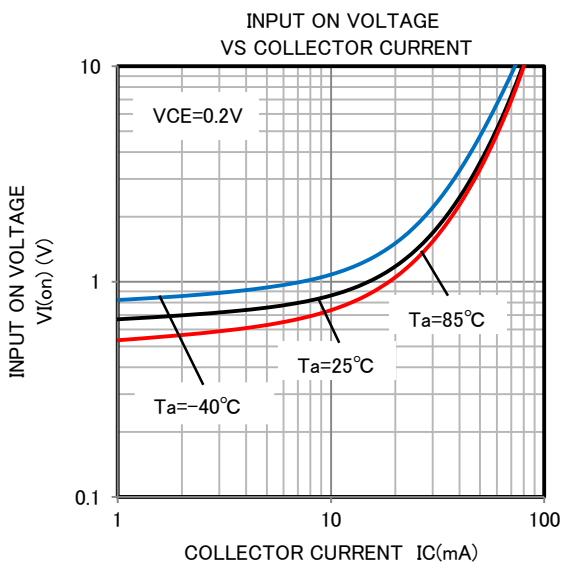
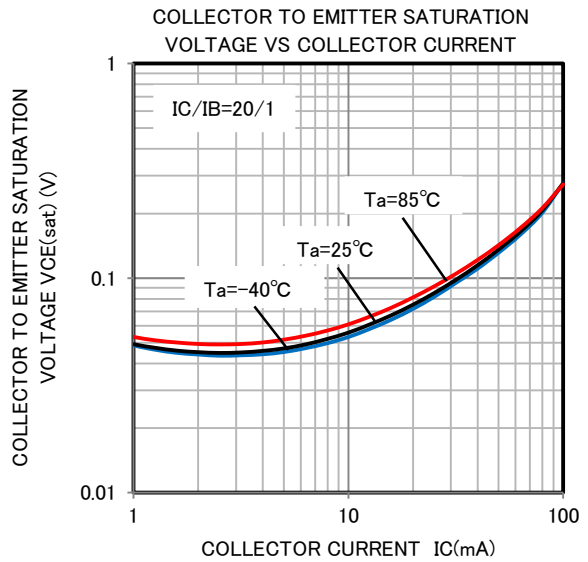
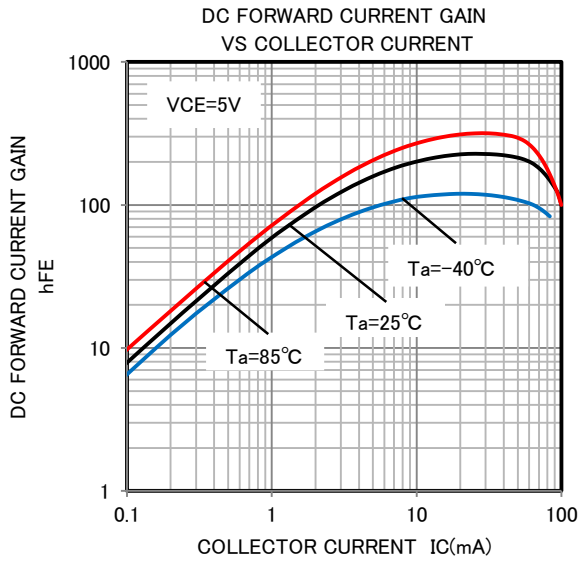
Symbol	Parameter	Test conditions	Limits			Unit	
			Min	Typ	Max		
V _{(BR)CEO}	Collector to Emitter breakdown voltage	I _C =100 μ A, R _{BE} = ∞	50	—	—	V	
I _{CB0}	Collector cut off current	V _{CB} =50V, I _E =0	—	—	0.1	μ A	
I _{EB0}	Emitter cut off current	V _{EB} =5V, I _C =0	76	102	147	μ A	
h _{FE}	DC forward current gain	V _{CE} =5V, I _C =10mA	80	—	—	—	
V _{CE(sat)}	Collector to Emitter saturation voltage	I _C =10mA, I _B =0.5mA	—	—	0.3	V	
V _{I(ON)}	Input on voltage	V _{CE} =0.2V, I _C =5mA	—	0.7	1.1	V	
V _{I(OFF)}	Input off voltage	V _{CE} =5V, I _C =100 μ A	0.5	0.6	—	V	
R ₁	Input resistor	—	1.5	2.2	2.9	k Ω	
R _{2/R1}	Resistor ratio	—	17	22	26	—	
f _T	Gain band width product	V _{CE} =6V, I _E =10mA	RTr1	—	200	—	MHz
			RTr2	—	150	—	

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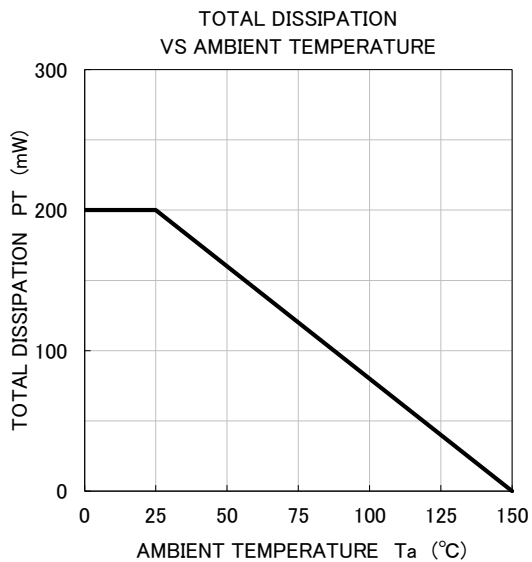
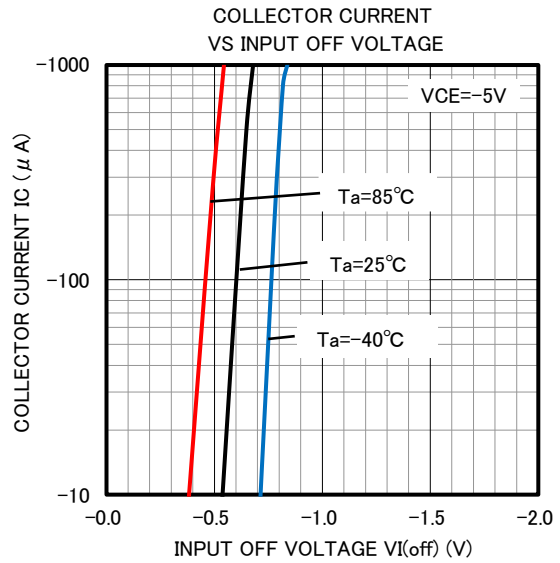
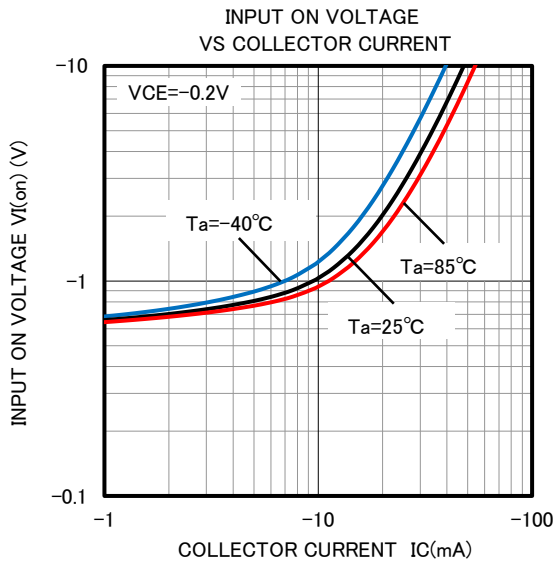
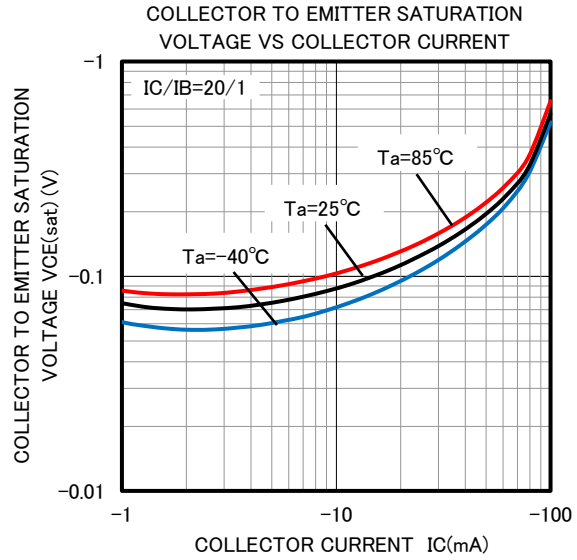
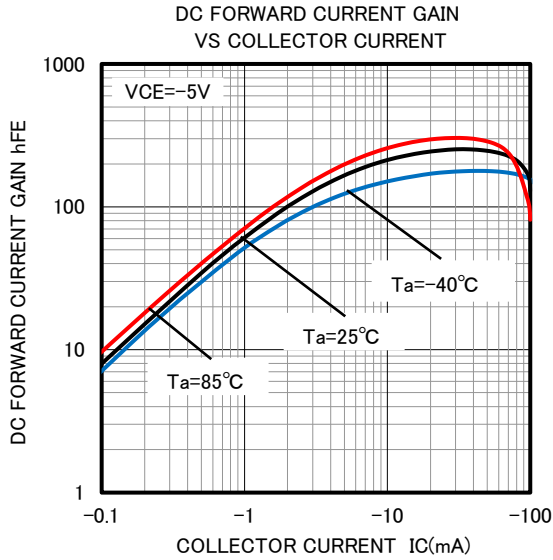
TYPICAL CHARACTERISTICS (RT_r1_NPN)



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TYPICAL CHARACTERISTICS (RT_r 2_PNP)



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