

RT3YA7M

Composite Transistor
For Muting Application

DESCRIPTION

RT3YA7M is a composite transistor built with RT1P140 and two muting transistor with resistor in SC-88 package.

FEATURE

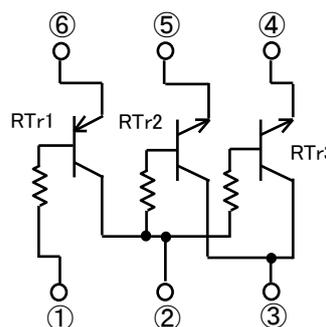
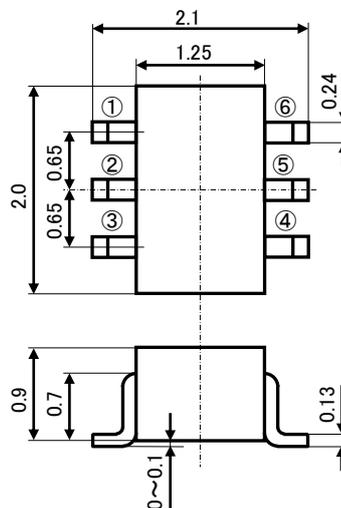
- RT3YA7M is built in RTr1 side RT1P140, and RTr2, RTr3 side composite muting transistor with resistor.
- Built-in bias resistor
- RTr1: $R_i = 10k\Omega$ RTr2, RTr3: $R_i = 4.7k\Omega$
- Mini package for easy mounting

APPLICATION

muting circuit, switching circuit

OUTLINE DRAWING

Unit: mm



TERMINAL CONNECTOR

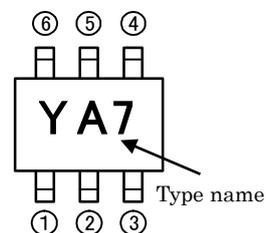
- ①: BASE1
- ②: COLLECTOR1
BASE2,3
- ③: COLLECTOR2,3
- ④: EMITTER3
- ⑤: EMITTER2
- ⑥: EMITTER1

JEITA: SC-88

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

SYMBOL	PARAMETER	RTr1 RATING	RTr2, RTr3 RATING	UNIT
V_{CBO}	Collector to Base voltage	-9	40	V
V_{EBO}	Emitter to Base voltage	-50	40	V
V_{CEO}	Collector to Emitter voltage	-9	15	V
I_C	Collector current	-100	200	mA
P_T	Total dissipation	150		mW
T_j	Junction temperature	+150		$^\circ\text{C}$
T_{stg}	Storage temperature	-55 ~ +150		$^\circ\text{C}$

MARKING



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ELECTRICAL CHARACTERISTICS (Ta=25°C) (RTr1 side)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
V _{CBO}	Collector-base breakdown voltage	I _C =-50μA, I _E =0mA	-9	-	-	V
V _{EBO}	Emitter-base breakdown voltage	I _E =-50μA, I _C =0mA	-50	-	-	V
V _{CEO}	Collector-emitter breakdown voltage	I _C =-1mA, R _{BE} =∞	-9	-	-	V
I _{CBO}	Collector cutoff current	V _{CB} =-6V, I _E =0mA	-	-	-0.1	μA
I _{EBO}	Emitter cutoff current	V _{EB} =-50V, I _C =0mA	-	-	-0.1	μA
h _{FE}	DC current transfer ratio	V _{CE} =-5V, I _C =-1mA	-	10	-	-
R ₁	Input resistance	-	-	10	-	kΩ

ELECTRICAL CHARACTERISTICS (Ta=25°C) (RTr2,RTr3 common)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
V _{CBO}	Collector-base breakdown voltage	I _C =50μA, I _E =0mA	40	-	-	V
V _{EBO}	Emitter-base breakdown voltage	I _E =50μA, I _C =0mA	40	-	-	V
V _{CEO}	Collector-emitter breakdown voltage	I _C =1mA, R _{BE} =∞	15	-	-	V
I _{CBO}	Collector cutoff current	V _{CB} =40V, I _E =0mA	-	-	0.5	μA
I _{EBO}	Emitter cutoff current	V _{EB} =40V, I _C =0mA	-	-	0.5	μA
h _{FE}	DC current transfer ratio	V _{CE} =5V, I _C =10mA	820	-	2500	-
V _{CE(sat)}	Collector-emitter saturation voltage	I _C =50mA, I _B =5mA	-	-	100	mV
R ₁	Input resistance	-	-	4.7	-	kΩ
f _T	Transition frequency	V _{CE} =6V, I _E =-10mA	-	58	-	MHz
R _{ON}	Output On-resistance	V _{IN} =3V, f=1MHz	-	1.8	-	Ω

Keep safety first in your circuit designs!

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