RT3YB7M

Composite Transistor
For Muting Application

DESCRIPTION

RT3YB7M is a composite transistor built with RT1P140 and two muting transistor with resistor in SC-88 package.

FEATURE

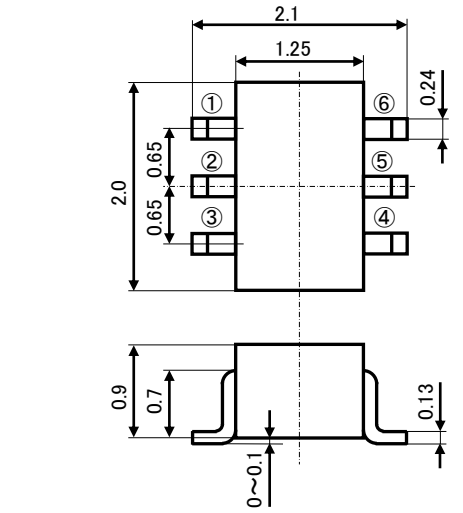
・RT3Y97M is built in RTr1 side RT1P140,and RTr2,RTr3 side composite muting transistor with resistor.
・Built-in bias resistor
RTr1:R_1=10kΩ RTr2,RTr3:R_1=10kΩ
・Mini package for easy mounting

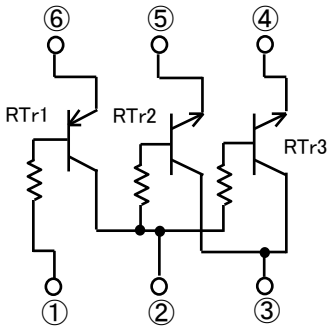
APPLICATION

muting circuit、switching circuit

OUTLINE DRAWING

Unit:mm





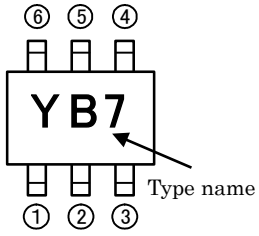
TERMINAL CONNECTOR
①:BASE1
②:COLLECTOR1
BASE2,3
③:COLLECTOR2,3
④:EMITTER3
⑤:EMITTER2
⑥:EMITTER1

JEITA:SC-88

MAXIMUM RATING (Ta=25℃)

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		℃
T_{stg}	Storage temperature	−55～+150		℃

MARKING



ELECTRICAL CHARACTERISTICS (Ta=25℃) (RTr1side)

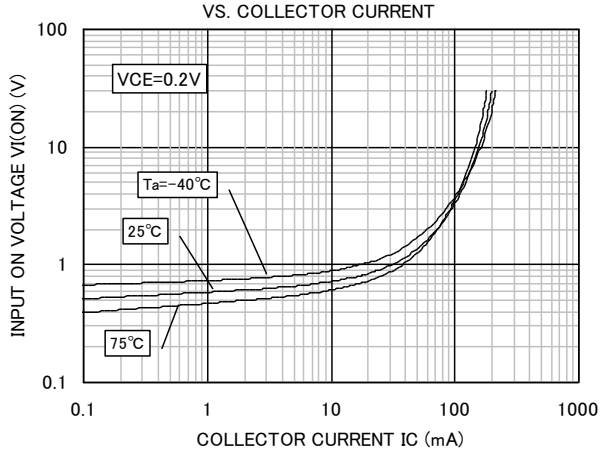
Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
V_{CBO}	Collector-base breakdown voltage	I_C=-50μA, I_E=0mA	-9	-	-	V
V_{EBO}	Emitter-base breakdown voltage	I_E=-50μA, I_C=0mA	-50	-	-	V
V_{CEO}	Collector-emitter breakdown voltage	I_C=-1mA, R_{BE}=∞	-9	-	-	V
I_{CBO}	Collector cutoff current	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℃) (RTr2 , RTr3 common)

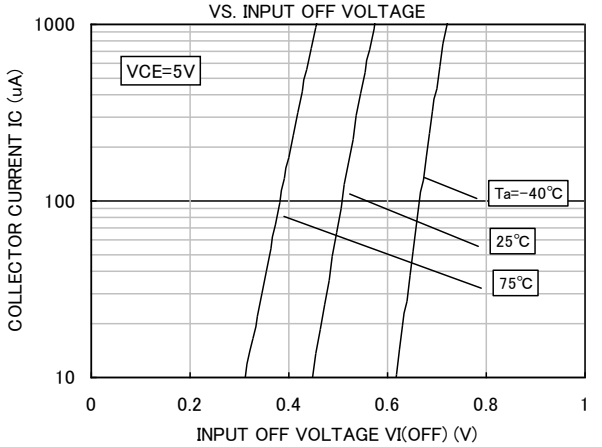
Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
V_{CBO}	Collector-base breakdown voltage	I_C=50μA, I_E=0mA	40	-	-	V
V_{EBO}	Emitter-base breakdown voltage	I_E=50μA, I_C=0mA	40	-	-	V
V_{CEO}	Collector-emitter breakdown voltage	I_C=1mA, R_{BE}=∞	15	-	-	V
I_{CBO}	Collector cutoff current	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	-	-	10	-	kΩ
f_T	Transition frequency	V_{CE}=6V, I_E=-10mA	-	55	-	MHz
R_{ON}	Output On-resistance	V_{IN}=3V, f=1MHz	-	2.0	-	Ω

TYPICAL CHARACTERISTICS (RTr2 , RTr3)

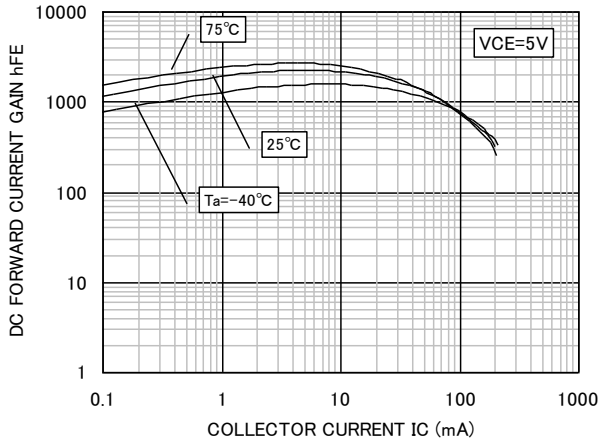
INPUT ON VOLTAGE
VS. COLLECTOR CURRENT



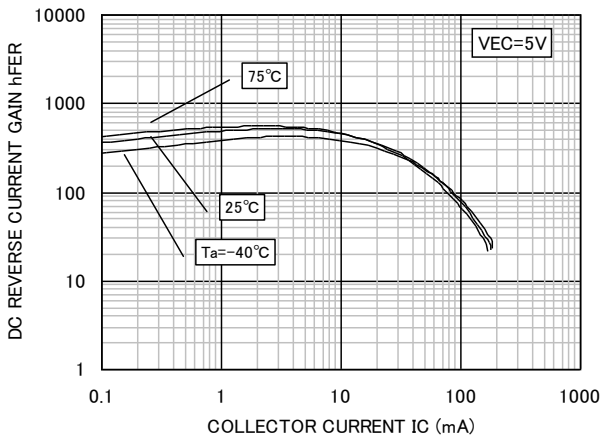
COLLECTOR CURRENT
VS. INPUT OFF VOLTAGE



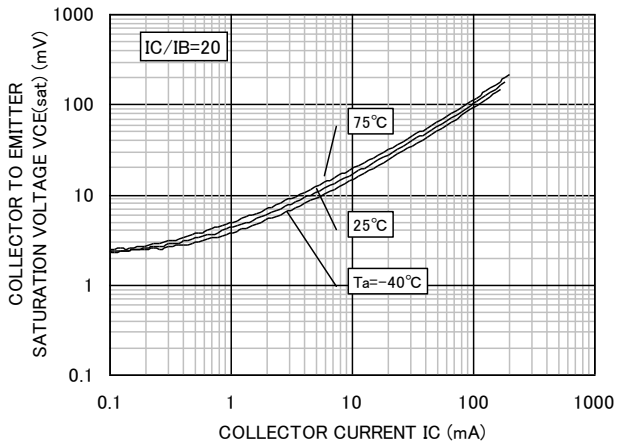
DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT



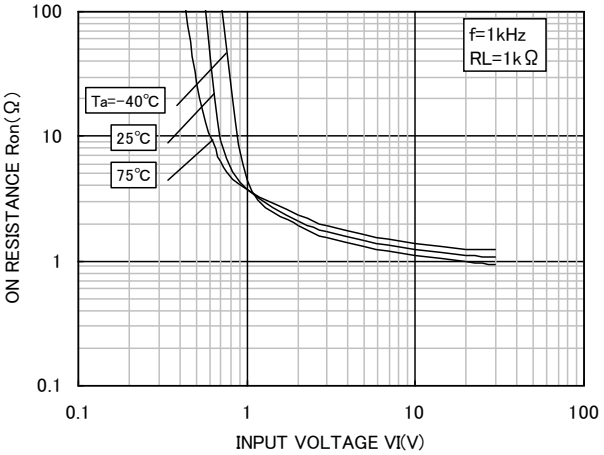
DC REVERSE CURRENT GAIN
VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE
VS. COLLECTOR CURRENT



ON RESISTANCE VS. INPUT VOLTAGE



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