〈SMALL-SIGNAL TRANSISTOR〉

RT1C3904

FOR GENERAL PURPOSE APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

RT1C3904 is a mini package resin sealed silicon NPN epitaxial transistor,
It is designed for General purpose application.
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FEATURE

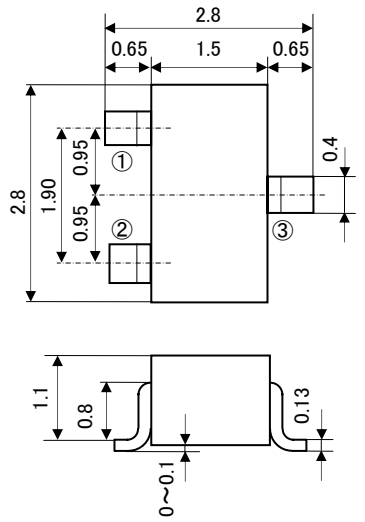
■Super mini package for easy mounting

APPLICATION

General purpose transistor

OUTLINE DRAWING

UNIT : mm



JEITA : SC-59
JEDEC : Similar to TO-236

TERMINAL CONNECTER
①: BASE
②: EMITTER
③: COLLECTOR

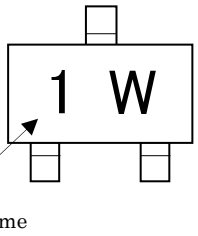
MAXIMUM RATING (Ta=25℃)

SYMBOL	PARAMETER	RATINGS	UNIT
VCEO	Collector to Emitter voltage	40	V
VCBO	Collector to Base voltage	60	V
VEBO	Emitter to Base voltage	6.0	V
Ic	Collector current	200	mA

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	RATINGS	UNIT
PD	Collector dissipation (*1)	225 1.8	mW mW/℃
RθJA	Thermal resistance junction to ambient	556	℃/W
PD	Collector dissipation (*2)	300 2.4	mW mW/℃
RθJA	Thermal resistance junction to ambient	417	℃/W
T_j	Junction temperature	+150	℃
T_{stg}	Storage temperature	-55～+150	℃

MARKING



Type name

ELECTRICAL CHARACTERISTICS (Ta=25℃)

SYMBOL	PARAMETER	TEST CONDITIONS	LIMIT			UNIT
			MIN	TYP	MAX	
V(BR)CEO	C to E Breakdown Voltage	Ic=1.0mA,IB=0	40	−	−	V
V(BR)CBO	C to B Breakdown Voltage	Ic=10μA,IE=0	60	−	−	V
V(BR)EBO	E to B Breakdown Voltage	Ic=10μA,IC=0	6	−	−	V
IBL	Base Cut Off Current	VCE=30V,VEB=3.0V	−	−	50	nA
ICEX	Collector Cut Off Current	VCE=30V,VEB=3.0V	−	−	50	nA

(*1)Mounted on Glass epoxy board (25.4×19.1×0.8mm)

(*2)Mounted on Alumina board (10.2×7.6×0.8mm)

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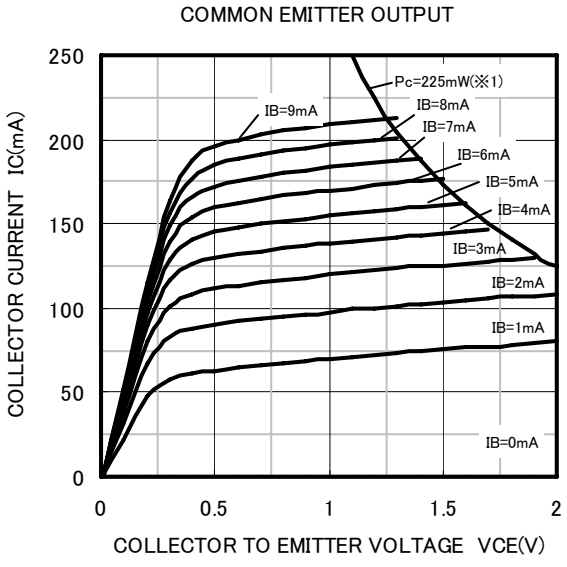
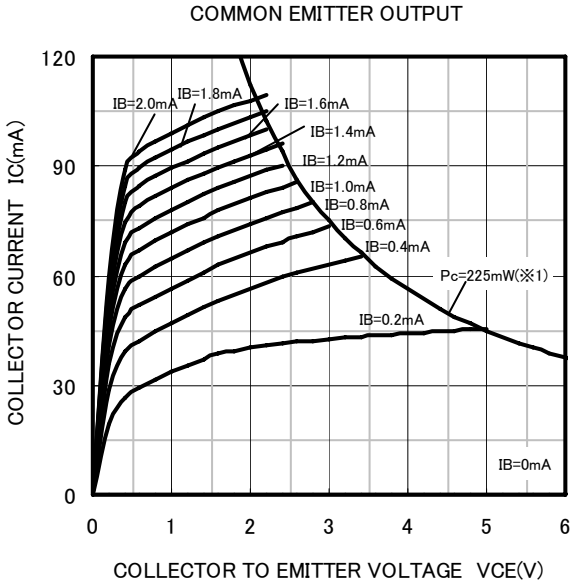
ELECTRICAL CHARACTERISTICS (Ta=25℃)

SYMBOL	PARAMETER	TEST CONDITIONS	LIMIT			UNIT
			MIN	TYP	MAX	
hFE	DC Forward Current Gain	Ic=0.1mA,VCE=1.0V	40	–	–	–
		Ic=1.0mA,VCE=1.0V	70	–	–	
		Ic=10mA,VCE=1.0V	100	–	300	
		Ic=50mA,VCE=1.0V	60	–	–	
		Ic=100mA,VCE=1.0V	30	–	–	
VCE (sat)	C to E Saturation Voltage	Ic=10mA,I B=1.0mA	–	–	0.2	V
		Ic=50mA, I B =5.0mA	–	–	0.3	V
VBE (sat)	B to E Saturation Voltage	Ic=10mA,I B=1.0mA	0.65	–	0.85	V
		Ic=50mA, I B =5.0mA	–	–	0.95	V
fT	Current Gain Band Width Product	IC=10mA,VCE=20V	300	–	–	MHz
Cobo	Output capacitance	VCB=5V,IE=0,f=1MHz	–	–	4.0	pF

TYPICAL CHARACTERISTICS





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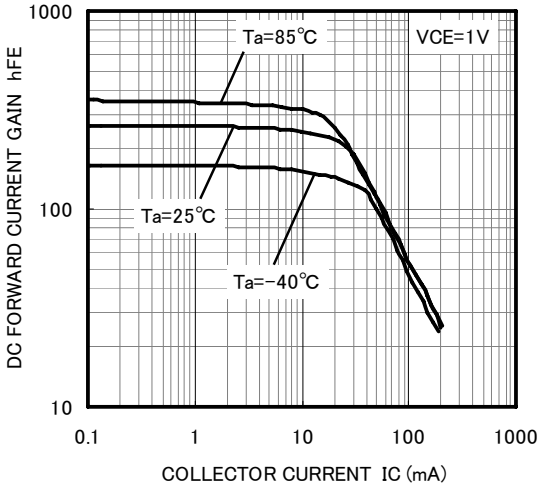
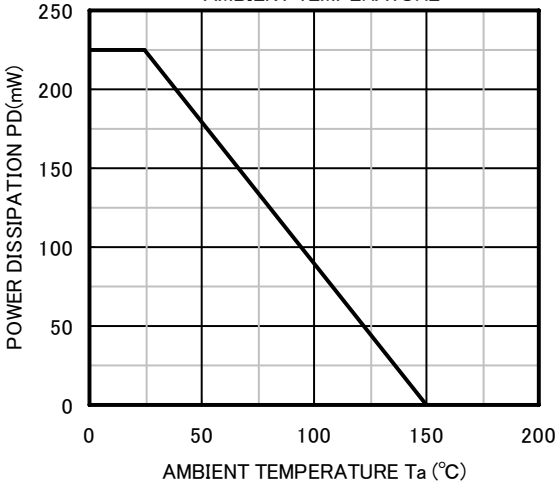
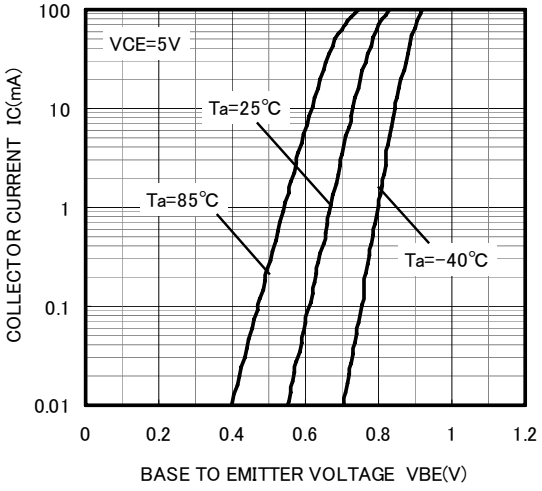
DC FORWARD CURRENT GAIN VS.
COLLECTOR CURRENT



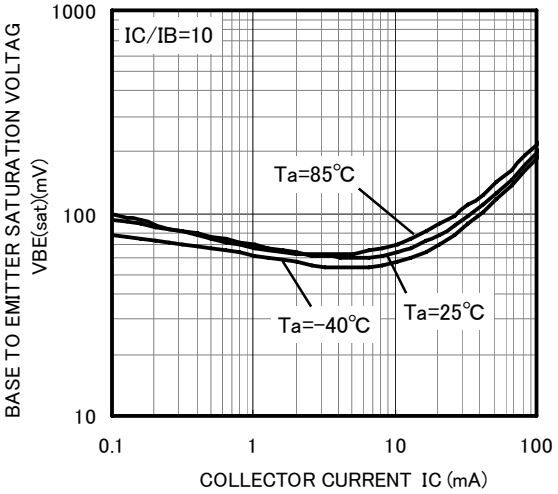
POWER DISSIPATION VS.
AMBIENT TEMPERATURE



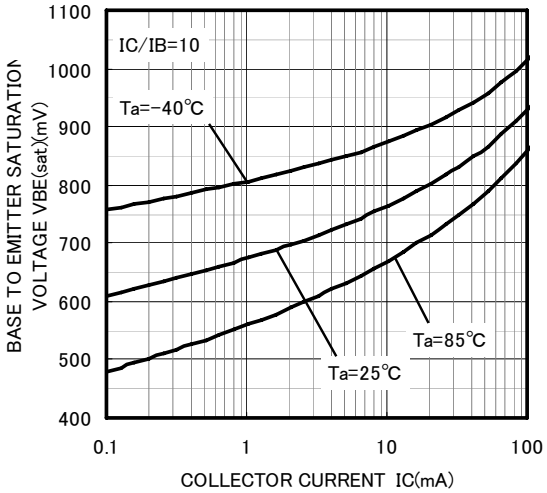
COMMON EMITTER TRANSFER



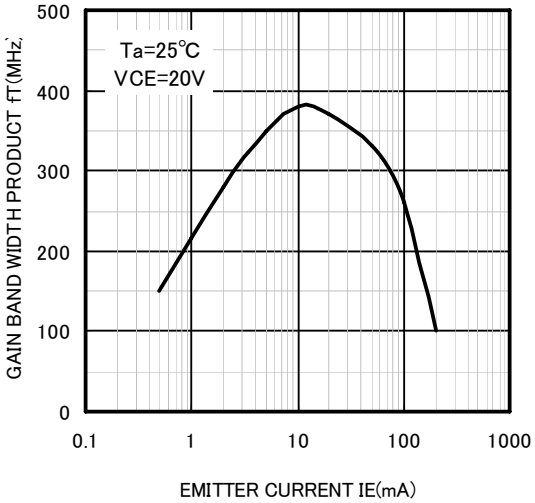
COLLECTOR TO EMITTER SATURATION
VOLTAGE VS. COLLECTOR CURRENT



BASE TO EMITTER SATURATION
VOLTAGE VS. COLLECTOR CURRENT



GAIN BAND WIDTH PRODUCT VS.
EMITTER CURRENT



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