

DESCRIPTION

Mitsubishi 2SA1603 is a super mini package resin sealed silicon PNP epitaxial type transistor. It is designed for low frequency voltage amplify application.

Complementary with 2SC4155.

With the equivalent feature of SC-59 package 2SA1530.

FEATURE

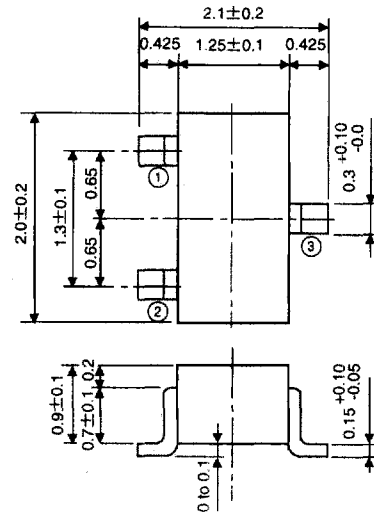
- Small collector to emitter saturation voltage
 $V_{CE(sat)} = -0.3V$ max (@ $I_C = -30mA, I_E = -1.5mA$)
- Excellent linearity of DC forward current gain
- Super mini package for easy mounting

APPLICATION

For hybrid IC, small type machine low frequency voltage amplify application.

OUTLINE DRAWING

Unit:mm



TERMINAL CONNECTOR

- ①: BASE
- ②: EMITTER
- ③: COLLECTOR

EIAJ: SC-70

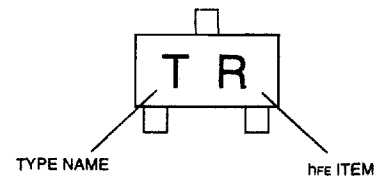
Note)

The dimension without tolerance represent central value.

MAXIMUM RATINGS (Ta=25°C)

Symbol	Parameter	Rating	Unit
V_{CB0}	Collector to Base voltage	-50	V
V_{EB0}	Emitter to Base voltage	-6	V
V_{CE0}	Collector to Emitter voltage	-50	V
I_C	Collector current	-100	mA
P_C	Collector dissipation (Ta=25°C)	150	mW
T_j	Junction temperature	+125	°C
T_{stg}	Storage temperature	-55 to +125	°C

MARKING



ELECTRICAL CHARACTERISTICS (Ta=25°C)

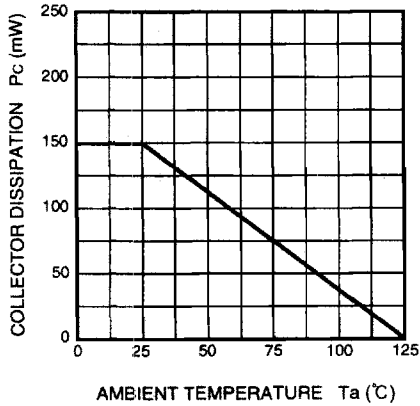
Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CEO}$	C to E break down voltage	$I_C = -100 \mu A, R_{BE} = \infty$	-50			V
I_{CBO}	Collector cut off current	$V_{CB} = -50V, I_E = 0$			-0.5	μA
I_{EBO}	Emitter cut off current	$V_{EB} = -4V, I_C = 0$			-0.5	μA
$h_{FE} *$	DC forward current gain	$V_{CE} = -6V, I_C = -1mA$	120		820	—
h_{FE}	DC forward current gain	$V_{CE} = -6V, I_C = -0.1mA$	70			—
$V_{CE(sat)}$	C to E saturation voltage	$I_C = -30mA, I_E = -1.5mA$			-0.3	V
f_T	Gain band width product	$V_{CE} = -6V, I_E = 10mA$		200		MHz
C_{ob}	Collector output capacitance	$V_{CB} = -6V, I_E = 0, f = 1MHz$		2.5		pF

* : It shows hFE classification in right table.

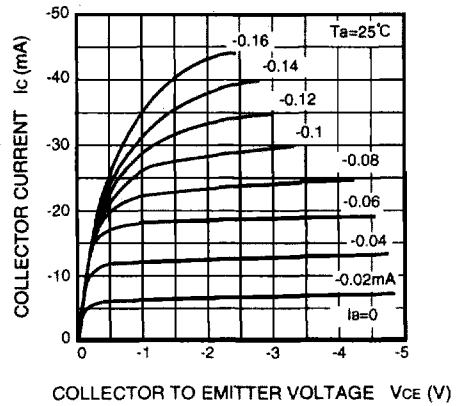
Item	Q	R	S	T
hFE	120 to 270	180 to 390	270 to 560	390 to 820
Marking	TQ	TR	TS	TT

TYPICAL CHARACTERISTICS

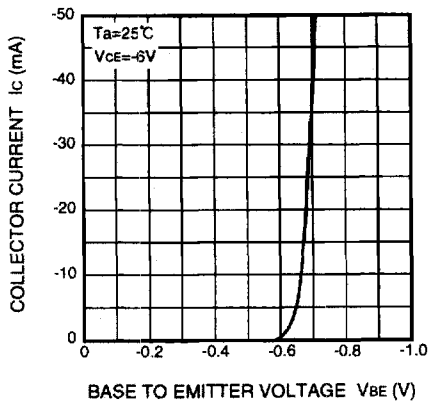
COLLECTOR DISSIPATION
VS. AMBIENT TEMPERATURE



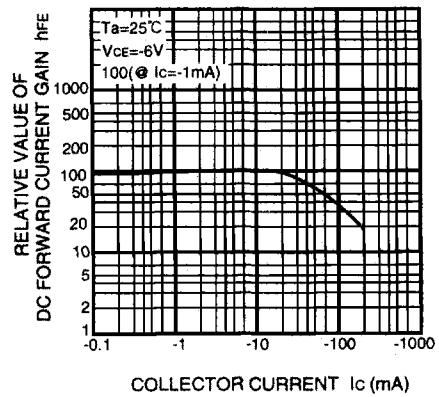
COMMON EMITTER OUTPUT



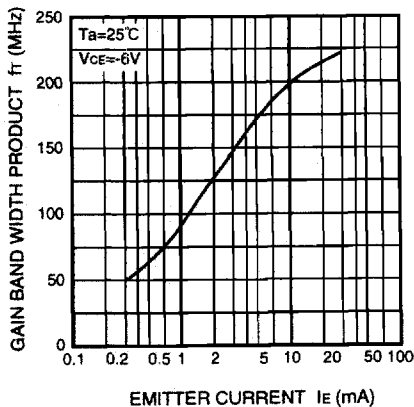
COMMON EMITTER TRANSFER



DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT



GAIN BAND WIDTH PRODUCT
VS. EMITTER CURRENT



COLLECTOR OUTPUT CAPACITANCE
VS. COLLECTOR TO BASE VOLTAGE

