

## PRELIMINARY

Notice: This is not a final specification  
Some parametric are subject to change.

# RT3W77M

Composite Transistor  
For General Purpose High Current Drive Application  
Silicon Epitaxial Type

## DESCRIPTION

RT3W77M is compound transistor built with 2SC6046 chip and 2SA2166 chip in SC-88 package.

## FEATURE

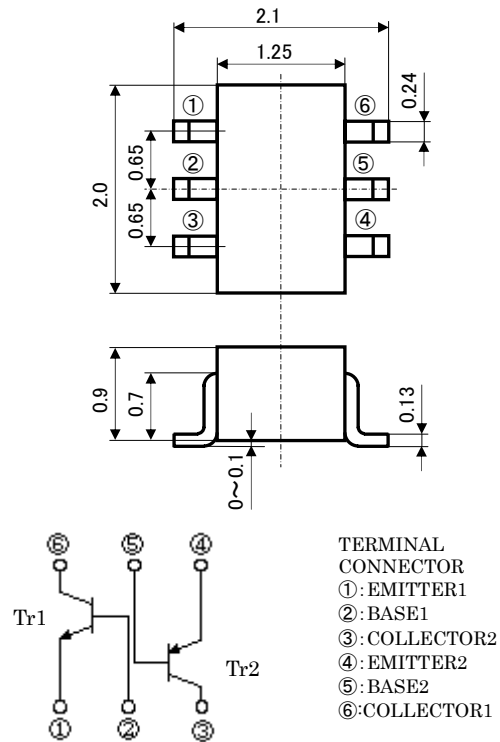
- High collector current
- Low collector to emitter saturation voltage
- Each transistor elements are independent
- Mini package for easy mounting

## APPLICATION

For switching application, small type motor drive application

## OUTLINE DRAWING

Unit: mm



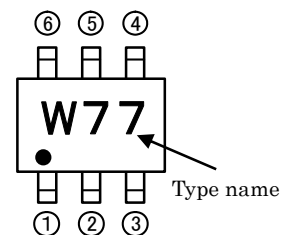
TERMINAL  
CONNECTOR  
①: EMITTER1  
②: BASE1  
③: COLLECTOR2  
④: EMITTER2  
⑤: BASE2  
⑥: COLLECTOR1

JEITA: SC-88

## MAXIMUM RATING (Ta=25°C) (Tr1\_NPN, Rr2\_PNP)

SYMBOL	PARAMETER	RATING		UNIT
		Tr1	Tr2	
V <sub>CEO</sub>	Collector to Emitter voltage	40	-60	V
V <sub>CBO</sub>	Collector to Base voltage	75	-60	V
V <sub>EBO</sub>	Emitter to Base voltage	6	-5	V
I <sub>C</sub>	Collector current	600	-500	mA
P <sub>T</sub>	Total dissipation	200		mW
T <sub>j</sub>	Junction temperature	+150		°C
T <sub>stg</sub>	Storage temperature	-55~+150		°C

## MARKING



## ELECTRICAL CHARACTERISTICS (Ta=25°C) (Tr1\_NPN, Rr2\_PNP)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
V <sub>(BR)CEO</sub>	Collector to Emitter breakdown voltage	I <sub>C</sub> =1mA, I <sub>B</sub> =0	40	—	—	V
		I <sub>C</sub> =-1mA, I <sub>B</sub> =0	-60	—	—	
V <sub>(BR)CBO</sub>	Collector to Base breakdown voltage	I <sub>C</sub> =10μA, I <sub>E</sub> =0	75	—	—	V
		I <sub>C</sub> =-10μA, I <sub>E</sub> =0	-60	—	—	
V <sub>(BR)EBO</sub>	Emitter to Base breakdown voltage	I <sub>E</sub> =10μA, I <sub>C</sub> =0	6	—	—	V
		I <sub>E</sub> =-10μA, I <sub>C</sub> =0	-5	—	—	
I <sub>CBO</sub>	Collector cut off current	V <sub>CB</sub> =60V, I <sub>E</sub> =0	—	—	0.1	μA
		V <sub>CB</sub> =-50V, I <sub>E</sub> =0	—	—	-0.1	
I <sub>EBO</sub>	Emitter cut off current	V <sub>EB</sub> =3V, I <sub>C</sub> =0	—	—	0.1	μA
		V <sub>EB</sub> =-3V, I <sub>C</sub> =0	—	—	-0.1	
h <sub>FE</sub>	DC forward current gain	V <sub>CE</sub> =10V, I <sub>C</sub> =150mA	100	—	300	—
		V <sub>CE</sub> =-10V, I <sub>C</sub> =-150mA				
V <sub>CE(sat)</sub>	Collector to Emitter saturation voltage	I <sub>C</sub> =150mA, I <sub>B</sub> =15mA	—	—	0.3	V
		I <sub>C</sub> =-150mA, I <sub>B</sub> =-15mA	—	—	-0.4	
V <sub>BE(sat)</sub>	Base to Emitter saturation voltage	I <sub>C</sub> =150mA, I <sub>B</sub> =15mA	0.6	—	1.2	V
		I <sub>C</sub> =-150mA, I <sub>B</sub> =-15mA	—	—	-1.3	
f <sub>T</sub>	Gain band width product	V <sub>CE</sub> =20V, I <sub>E</sub> =50mA, f=100MHz	—	250	—	MHz
		V <sub>CE</sub> =-20V, I <sub>E</sub> =50mA, f=100MHz	200	—	—	
C <sub>ob</sub>	Collector output capacitance	V <sub>CB</sub> =10V, f=1MHz	—	—	8	pF
		V <sub>CB</sub> =-10V, f=1MHz				



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