

Specification	Products	Type
	F M T	FMC3A

FD:511-2203

## 1. SCOPE FMC3A

1.1 Scope. This specification covers the detail requirements for one type silicon epitaxial planar digital transistor designed for switching circuit.

1.2 Physical dimensions. See figure.

1.3 Absolute maximum ratings. ( $T_a = 25^\circ\text{C}$ )

## 1.3.1. Element 1 (Pin No. 1-2-3)

Supply voltage	$V_{CC}$	.....	- 5.0 V
Input voltage	$V_{IN}$	.....	- 4.0 ~ 10 V
Collector current	$I_{C(max)}$ *	.....	- 100 mA
Output dissipation	$I_O$	.....	- 50 mA

## 1.3.2. Element 2 (Pin No. 1-4-5)

Supply voltage	$V_{CC}$	.....	5.0 V
Input voltage	$V_{IN}$	.....	- 1.0 ~ 4.0 V
Collector current	$I_{C(max)}$ *	.....	100 mA
Output dissipation	$I_O$	.....	50 mA

## 1.3.3. Each element

Power dissipation	$P_d$	.....	300 mW/Total*
Junction temperature	$T_j$	.....	150°C
Storage temperature range	$T_{stg}$	.....	- 55 ~ 150°C

\* Should be less than 200 mW per element.

Never use this product beyond the absolute maximum ratings, as there is danger of combustion or burst.

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ROHM CO., LTD.

# MASTER

Design

Approval

Specification No.

FZMC3-2

Date

26/OCT/93

FD:511-2203

 2. Electrical characteristics (T<sub>a</sub> = 25°C)

## 2-1. Element 1 (Pin No. 1-2-3)

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
V <sub>I(off)</sub>	V <sub>CC</sub> =-5V, I <sub>O</sub> =-100μA	-	-	-0.5	V
V <sub>I(on)</sub>	V <sub>O</sub> =-0.3V, I <sub>O</sub> =-10mA	-3.0	-	-	V
V <sub>O(on)</sub>	I <sub>O</sub> =-10mA, I <sub>I</sub> =-0.5mA	-	-0.1	-0.3	V
I <sub>I</sub>	V <sub>I</sub> =-5V	-	-	-0.88	mA
I <sub>O(off)</sub>	V <sub>CC</sub> =-50V, V <sub>I</sub> =0V	-	-	-0.5	μA
G <sub>I</sub>	V <sub>O</sub> =-5V, I <sub>O</sub> =-5mA	30	-	-	-
f <sub>T</sub> *	V <sub>CE</sub> =-10V, I <sub>E</sub> =5mA, f=100MHz	-	250	-	MHz
R <sub>1</sub>		-	10	-	kΩ
R <sub>2</sub> /R <sub>1</sub>		0.8	1.0	1.2	-

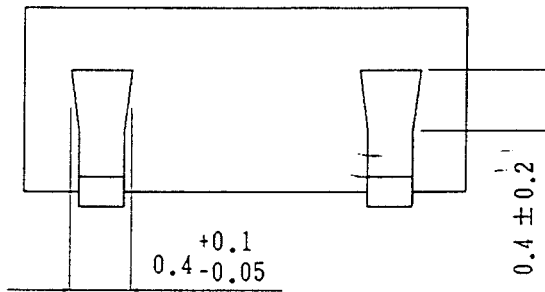
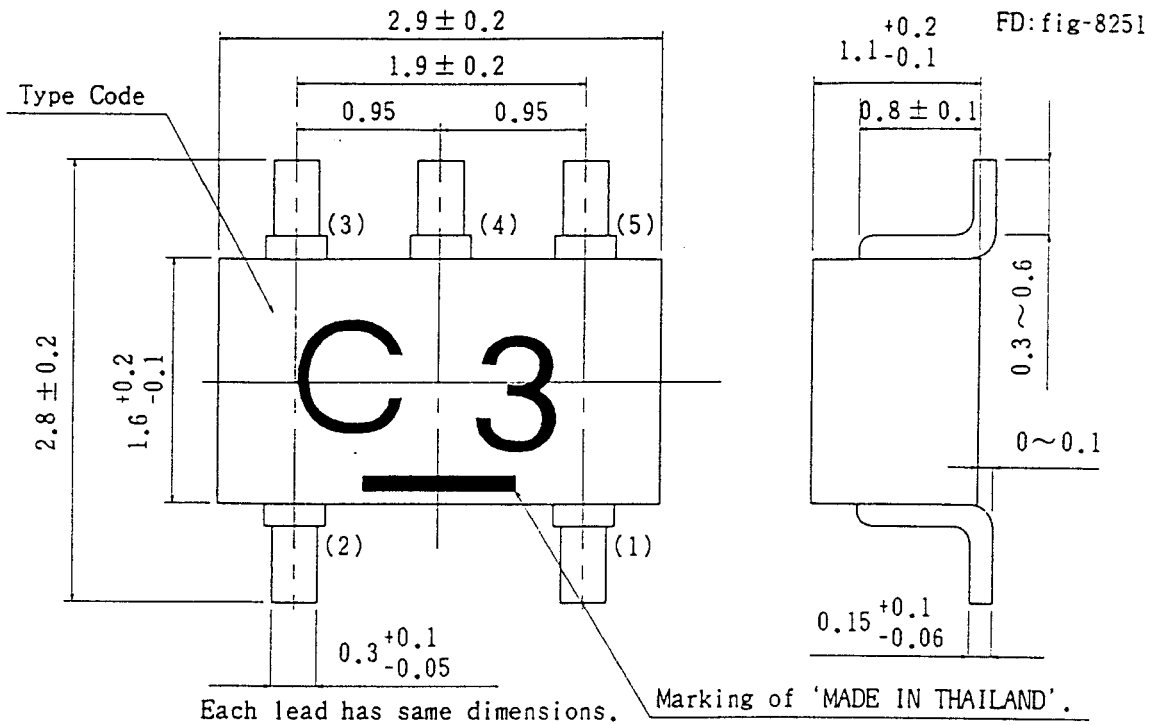
## 2-2. Element 2 (Pin No. 1-4-5)

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
V <sub>I(off)</sub>	V <sub>CC</sub> =5V, I <sub>O</sub> =100μA	-	-	0.5	V
V <sub>I(on)</sub>	V <sub>O</sub> =0.3V, I <sub>O</sub> =10mA	3.0	-	-	V
V <sub>O(on)</sub>	I <sub>O</sub> =10mA, I <sub>I</sub> =0.5mA	-	0.1	0.3	V
I <sub>I</sub>	V <sub>I</sub> =5V	-	-	0.88	mA
I <sub>O(off)</sub>	V <sub>CC</sub> =50V, V <sub>I</sub> =0V	-	-	0.5	μA
G <sub>I</sub>	V <sub>O</sub> =5V, I <sub>O</sub> =5mA	30	-	-	-
f <sub>T</sub> *	V <sub>CE</sub> =10V, I <sub>E</sub> =-5mA, f=100MHz	-	250	-	MHz
R <sub>1</sub>		-	10	-	kΩ
R <sub>2</sub> /R <sub>1</sub>		0.8	1.0	1.2	-

\*Characteristics of built-in transistor.

NOTE) This specification is in common for general and HR specification and same on characteristics · outfigure dimension.

Figure 1.



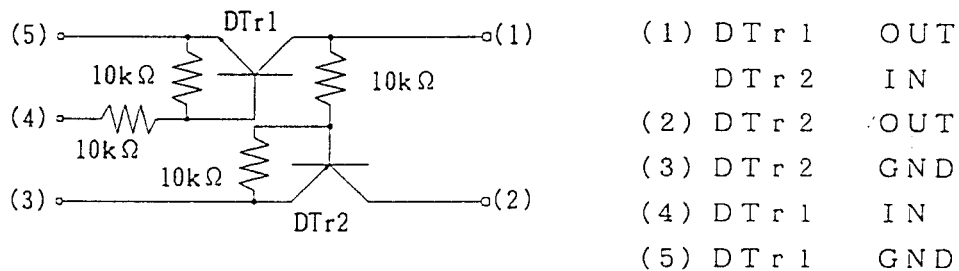
UNIT : mm

 Net weight  
about 14.0mg/pce

'C3' is symbol mark of FMC3A.

Inner circuit

FD:fig-9115



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