# **RT3P33M**

Composite Transistor With Resistor For Switching Application Silicon Epitaxial Type

## **DESCRIPTION**

RT3P33M is a composite transistor built with RT1P441 chip and RT1P441 chip in SC-88 package.

### **FEATURE**

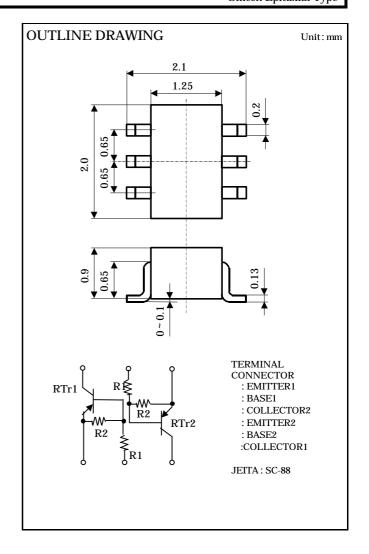
Silicon epitaxial type

Each transistor elements are independent.

Mini package for easy mounting

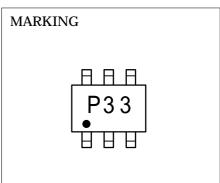
## **APPLICATION**

Inverted circuit, switching circuit, interface circuit, driver circuit



# MAXIMUM RATING (Ta=25)

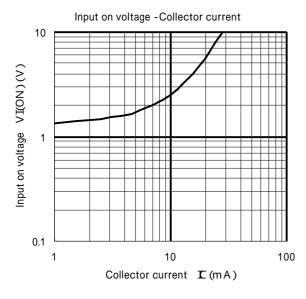
SYMBOL	PARAMETER	RATING	UNIT	
$V_{CBO}$	Collector to Base voltage	-50	V	
$V_{\mathrm{EBO}}$	Emitter to Base voltage	-10	V	
$V_{CEO}$	Collector to Emitter voltage	-50	V	
$I_{C}$	Collector current	-100	mA	
$I_{CM}$	Peak Collector current	-200	mA	
$P_{C}$	Collector dissipation (Total, Ta=25 )	150	mW	
T <sub>i</sub>	Junction temperature	+ 150		
$T_{stg}$	Storage temperature	-55 ~ + 150		

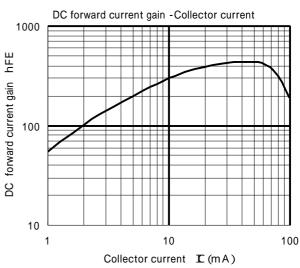


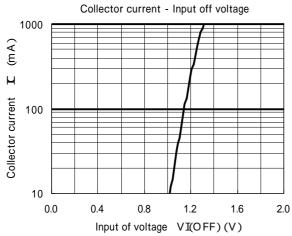
## ELECTRICAL CHARACTERISTICS (Ta=25)

Symbol	Parameter	Test conditions	Limits			T I *4
			Min	Тур	Max	Unit
V <sub>(BR)CEO</sub>	Collector to Emitter break down voltage	$I_{C}$ =100 $\mu$ A, $R_{BE}$ =	-50	-	-	V
$I_{CBO}$	Collector cut off current	$V_{CB}$ =50V, $I_{E}$ =0	-	-	-0.1	μA
$h_{\mathrm{FE}}$	DC forward current gain	$V_{CE}$ =5 $V$ , $I_{C}$ =5 $m$ A	50	-	-	-
V <sub>CE(sat)</sub>	Collector to Emitter saturation voltage	$I_C=10$ mA, $I_B=0.5$ mA	-	-0.1	-0.3	V
$V_{I(ON)}$	Input on voltage	$V_{\rm CE}$ =0.2V, $I_{\rm C}$ =5mA	-	-2.3	-5.0	V
$V_{I(OFF)}$	Input off voltage	$V_{\rm CE}$ =5V, $I_{\rm C}$ =100 $\mu$ A	-0.8	-1.1	-	V
R <sub>1</sub>	Input resistor	-	33	47	61	k
R <sub>2</sub> /R <sub>1</sub>	Resistor ratio	-	0.9	1.0	1.1	-
$f_{\mathrm{T}}$	Gain band width product	$V_{CE}$ =-6 $V$ , $I_{E}$ =10 $m$ A	-	150	-	$MH_Z$

TYPICAL CHARACTERISTICS









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