RT1N241X SERIES

Transistor

Transistor With Resistor For Switching Application Silicon NPN Epitaxial Type

DESCRIPTION

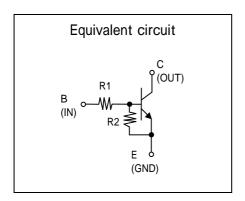
RT1N241X is a one chip transistor with built-in bias resistor,PNP type is RT1P241X.

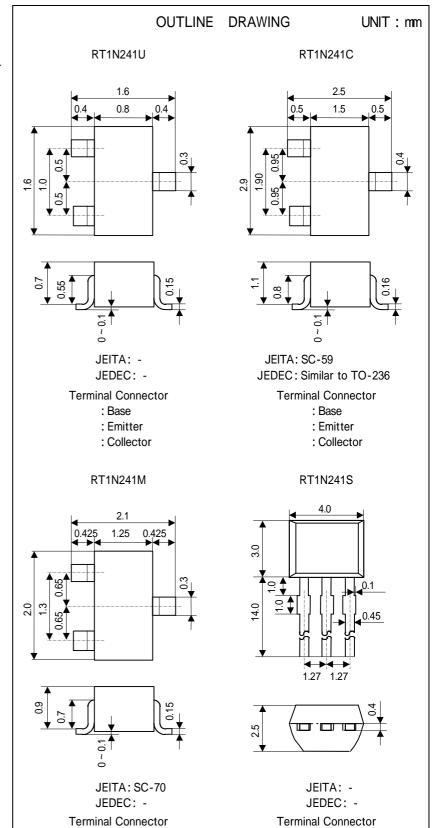
FEATURE

•Built-in bias resistor (R1=22k ,R2=22k).

APPLICATION

Inverted circuit, switching circuit, interface circuit, driver circuit.





: Emitter

: Base

: Collector

: Base : Emitter

: Collector

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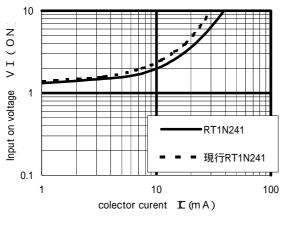
MAXIMUM RATING (Ta=25)

SYMBOL	PARAMETER	RATING				UNIT
		RT1N241U	RT1N241M	RT1N241C	RT1N241S	UNIT
V _{CBO}	Collector to Base voltage		V			
V_{EBO}	Emitter to Base voltage		V			
V_{CEO}	Collector to Emitter voltage		V			
Ι _C	Collector current		mA			
I _{CM}	Peak Collector current	200				
P_{c}	Collector dissipation(Ta=25)	150	20	00	450	mW
Tj	Junction temperature	+150	- 150 +150			
Tstg	Storage temperature	-55 ~ +150	-55 ~ + 150			

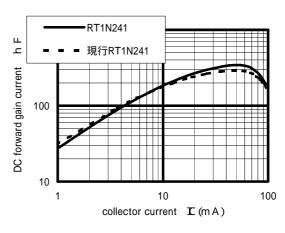
ELECTRICAL CHARACTERISTICS (Ta=25)

SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
		TEST CONDITION	MIN	TYP	MAX	OINIT
$V_{(BR)CEO}$	C to E 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	μΑ
h _{FE}	DC forward current gain	$V_{CE}=5V$, $I_{C}=5mA$	50			-
$V_{CE(sat)}$	C to E saturation voltage	$I_C = 10$ mA , $I_B = 0.5$ mA		0.1	0.3	V
$V_{I(ON)}$	Input on voltage	V_{CE} =0.2V , I $_{C}$ =5mA		1.8	3.0	V
$V_{I(OFF)}$	Input off voltage	V_{CE} =5 V , I_{C} =100 μ A	0.8	1.1		V
R ₁	Input resistance		16	22	28	k
R_2/R_1	Resistance ratio		0.9	1.0	1.1	
f_T	Gain band width product	$V_{CE}=6V$, $I_{E}=-10mA$		200		MHz

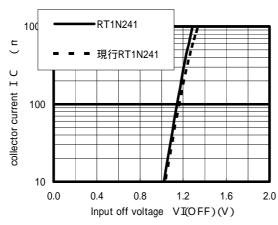
Input on voltage-collector current



DC forward gain current-collector current



collector current - Input on voltage





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