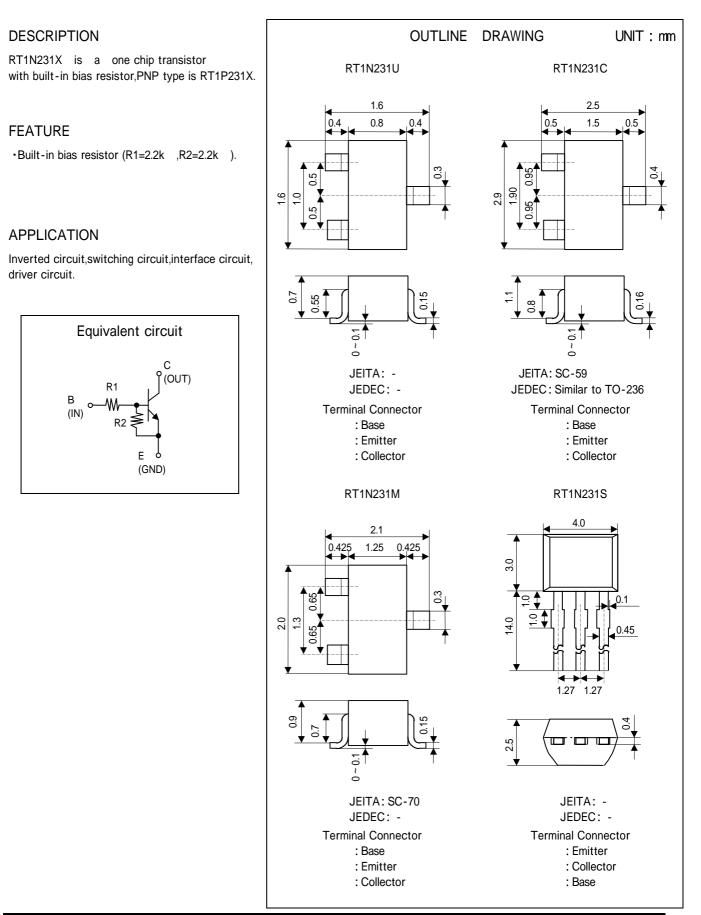
RT1N231X SERIES

Transistor Transistor With Resistor For Switching Application Silicon NPN Epitaxial Type



ISAHAYA ELECTRONICS CORPORATION

RT1N231X SERIES

Transistor With Resistor For Switching Application Silicon NPN Epitaxial Type

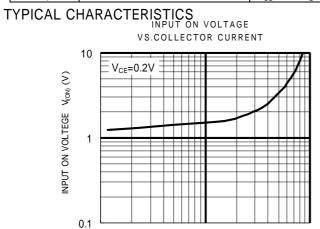
MAXIMUM RATING (Ta=25)

SYMBOL	PARAMETER	RATING				UNIT
		RT1N231U	RT1N231M	RT1N231C	RT1N231S	UNIT
V _{CBO}	Collector to Base voltage	50				
V _{EBO}	Emitter to Base voltage	10				
V _{CEO}	Collector to Emitter voltage	50				V
Ι _c	Collector current	100				
I _{CM}	Peak Collector current	200				mA
P _c	Collector dissipation(Ta=25)	150	2	00	450	mW
Tj	Junction temperature	+150	+150			
Tstg	Storage temperature	-55 ~ +150	-55 ~ +150			

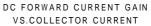
ELECTRICAL CHARACTERISTICS (Ta=25)

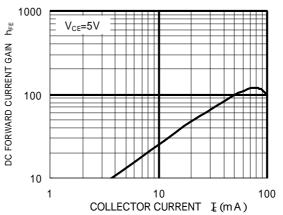
SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
		TEST CONDITION	MIN	TYP	MAX	UNIT
V _{(BR)CEO}	C to E break down voltage	Ι _c =100 μ A , R _{BE} =	50			V
I _{CBO}	Collector cut off current	V _{CB} =50V , I _E =0			0.1	μA
h _{FE}	DC forward current gain	V_{CE} =5V , I _C =20mA	20			-
$V_{CE(sat)}$	C to E saturation voltage	I _c =10mA , I _B =0.5mA			0.3	V
V _{I(ON)}	Input on voltage	V _{CE} =0.2V , I _C =5mA		1.3	2.2	V
V _{I(OFF)}	Input off voltage	V_{CE} =5V , I _C =100 μ A	0.7	1.1		V
R ₁	Input resistance		1.5	2.2	2.9	k
R_2/R_1	Resistance ratio		0.8	1.0	1.2	
f _T	Gain band width product	V _{CE} =6V , I _E =-10mA		200		MHz

1



 $\begin{array}{c} 10\\ \text{COLLECTOR CURRENT} \quad I_c \ (m \, A \,) \end{array}$





COLLECTOR CURRENT VS.INPUT OFF VOLTAGE 1000 V_{CE}=5V COLLECTOR CURRENT I_{c} (μ A) 100 10 0 1.2 2 0.4 0.8 1.6 INPUT OFF VOLTAGE $V_{I(OFF)}(V)$

100



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