

**Silicon NPN transistor epitaxial type (Bias resistor built-in transistor)**  
**ICT030N431 / ICT030N436 / ICT030N441**

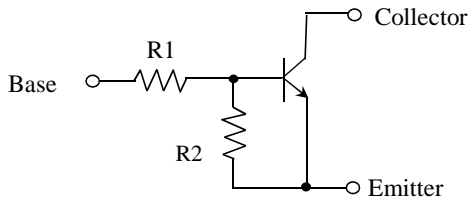
**[ Applications ]**

Switching circuit, Inverter circuit, Interface circuit and Driver circuit

**[ Feature ]**

Built-in bias resistors, Simplified circuit design

**[ Circuit diagram ]**



**[ Absolute maximum ratings (Ta=25°C) ]**

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	50	V
Collector-emitter voltage	VCEO	50	V
Emitter-base voltage	VEBO	5	V
Collector current	IC	100	mA
Junction temperature	Tj	150	C
Storage temperature	Tstg	-55 to 150	C

**[ Electrical characteristics (Ta=25°C) ]**

Characteristic	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base voltage	VCBO	50	-	-	V	ICB= 10uA
Collector-emitter voltage	VCEO	50	-	-	V	ICE= 1mA
Collector cut-off current	ICBO	-	-	0.1	uA	VCB= 50V
Collector cut-off current	ICEO	-	-	0.5	uA	VCE= 50V
Emitter cut-off current	ICT030N431	-	-	1.2	mA	VEB= 5V
	ICT030N436	-	-	0.22		
	ICT030N441	-	-	0.11		
DC current gain	ICT030N431	20	-	-	-	VCE= 5V, IC= 10mA
	ICT030N436	80	-	-		VCE= 5V, IC= 5mA
	ICT030N441	68	-	-		
Collector-emitter saturation voltage	VCE(sat)	-	-	0.3	V	IC= 10mA, IB= 0.5mA
Input on voltage	ICT030N431	3	-	-	V	VCE= 0.3V, IC= 5mA
	ICT030N436	1.3	-	-		
	ICT030N441	3	-	-		
Input off voltage	VI(off)	-	-	0.5	V	VCE= 5V, IC= 100uA
Input resistance	ICT030N431	3.29	4.7	6.11	kohm	-
	ICT030N436	3.29	4.7	6.11		
	ICT030N441	32.9	47	61.1		
Resistance ratio	ICT030N431	0.8	1	1.2	-	-
	ICT030N436	8	10	12		
	ICT030N441	0.8	1	1.2		
Transition Frequency	fT	-	250	-	MHz	VCE= 10V, IE= -5mA, f= 100MHz

Notice 1) These are measured data of transistors assembled by PHENITEC SEMICONDUCTOR Corp. and are for reference only.

Notice 2) The contents described herein are subject to change without notice.