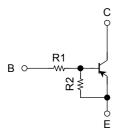
TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT process) (Bias Resistor built-in Transistor)

RN2901FE,RN2902FE,RN2903FE RN2904FE,RN2905FE,RN2906FE

Switching, Inverter Circuit, Interface Circuit and **Driver Circuit Applications.**

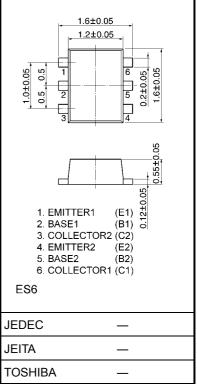
- Two devices are incorporated into an Extreme-Super-Mini (6 pin) package.
- Incorporating a bias resistor into a transistor reduces parts count. Reducing the parts count enable the manufacture of ever more compact equipment and save assembly cost.
- Complementary to RN1901FE~RN1906FE

Equivalent Circuit and Bias Resistor Values



Type No.	R1 (kΩ)	R2 (kΩ)
RN2901FE	4.7	4.7
RN2902FE	10	10
RN2903FE	22	22
RN2904FE	47	47
RN2905FE	2.2	47
RN2906FE	4.7	47

Unit: mm



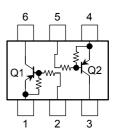
Weight: g (typ.)

Maximum Ratings (Ta = 25°C) (Q1, Q2 common)

Characteristics		Symbol	Rating	Unit	
Collector-base voltage	RN2901FE~	V_{CBO}	-50	V	
Collector-emitter voltage	RN2906FE	V _{CEO}	-50	V	
Emitter-base voltage	RN2901FE~ RN2904FE	V	-10	V	
	RN2905FE, RN2906FE	V _{EBO}	-5		
Collector current		IC	-100	mA	
Collector power dissipation	RN2901FE~	P _C (Note)	100	mW	
Junction temperature	RN2906FE	Tj	150	°C	
Storage temperature range		T _{stg}	-55~150	°C	

Note: Total rating

Equivalent Circuit (top view)

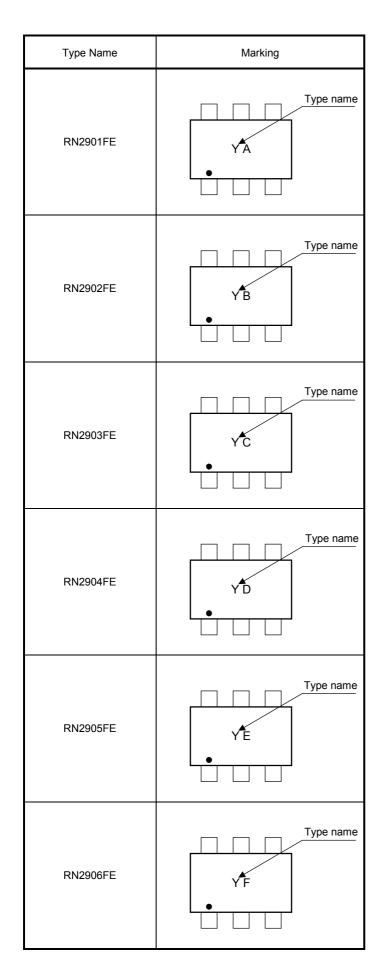




Electrical Characteristics (Ta = 25°C) (Q1, Q2 common)

Characteristics		Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	RN2901FE~2906FE	I _{CBO}	$V_{CB} = -50 \text{ V}, I_E = 0$	_	_	-100	nA
		I _{CEO}	$V_{CE} = -50 \text{ V}, I_B = 0$	_	_	-500	IIA
Emitter cut-off current	RN2901FE	l _{EBO}	$V_{EB} = -10 \text{ V, } I_C = 0$	-0.82	_	-1.52	mA
	RN2902FE			-0.38	_	-0.71	
	RN2903FE			-0.17	_	-0.33	
	RN2904FE			-0.082	_	-0.15	
	RN2905FE		$V_{EB} = -5 \text{ V, } I_C = 0$	-0.078	_	-0.145	
	RN2906FE			-0.074	_	-0.138	
	RN2901FE		V _{CE} = -5 V, I _C = -10 mA	30	_	_	
	RN2902FE	-		50	_	_	
DC current gain	RN2903FE	1 .		70	_	_	
	RN2904FE	- h _{FE}		80	_	_	
	RN2905FE			80	_	_	
	RN2906FE			80	_	_	
Collector-emitter saturation voltage	RN2901FE~2906FE	V _{CE (sat)}	$I_C = -5 \text{ mA},$ $I_B = -0.25 \text{ mA}$	_	-0.1	-0.3	V
	RN2901FE	V _I (ON)	$V_{CE} = -0.2 \text{ V},$ $I_{C} = -5 \text{ mA}$	-1.1	_	-2.0	. v
	RN2902FE			-1.2	_	-2.4	
	RN2903FE			-1.3	_	-3.0	
Input voltage (ON)	RN2904FE			-1.5	_	-5.0	
	RN2905FE	=		-0.6	_	-1.1	
	RN2906FE	-		-0.7	_	-1.3	
Innut valtage (OFF)	RN2901FE~2904FE	V _{I (OFF)}	V _{CE} = -5 V, I _C = -0.1 mA	-1.0	_	-1.5	٧
Input voltage (OFF)	RN2905FE, 2906FE			-0.5	_	-0.8	
Transition frequency	RN2901FE~2906FE	f _T	$V_{CE} = -10 \text{ V},$ $I_{C} = -5 \text{ mA}$	_	200	_	MHz
Collector output capacitance	RN2901FE~2906FE	C _{ob}	$V_{CB} = -10 \text{ V}, I_E = 0,$ f = 1 MHz	_	3	6	pF
Input resistor	RN2901FE		_	3.29	4.7	6.11	kΩ
	RN2902FE			7	10	13	
	RN2903FE	-		15.4	22	28.6	
	RN2904FE	- R1		32.9	47	61.1	
	RN2905FE	1		1.54	2.2	2.86	
	RN2906FE			3.29	4.7	6.11	
Resistor ratio	RN2901FE~2904FE	R1/R2	_	0.9	1.0	1.1	
	RN2905FE			0.0421	0.0468	0.0515	
	RN2906FE			0.09	0.1	0.11	

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