

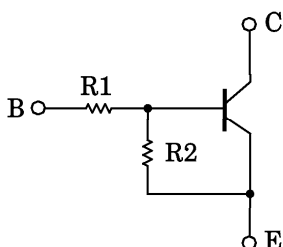
TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

**RN2421, RN2422, RN2423, RN2424  
RN2425, RN2426, RN2427**

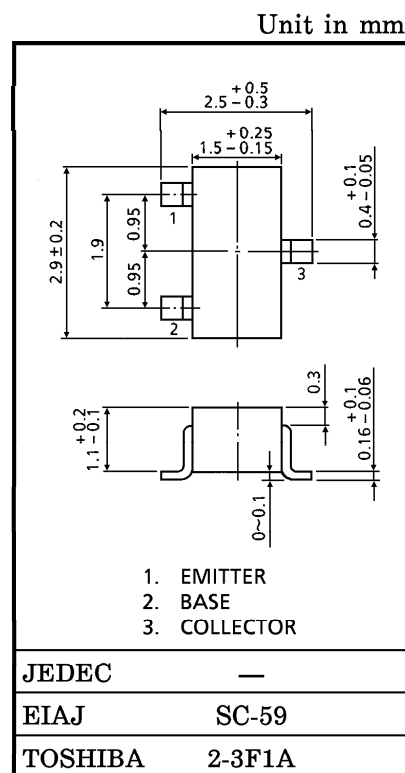
SWITCHING, INVERTER CIRCUIT, INTERFACE CIRCUIT  
AND DRIVER CIRCUIT APPLICATIONS

- High Current Type ( $I_C (Max.) = -800mA$ )
- With Built-in Bias Resistors
- Simplify Circuit Design
- Reduce a Quantity of Parts Manufacturing Process
- Low  $V_{CE(sat)}$
- Complementary to RN1421~1427

EQUIVALENT CIRCUIT AND BIAS RESISTOR VALUES



TYPE No.	R1 (kΩ)	R2 (kΩ)
RN2421	1	1
RN2422	2.2	2.2
RN2423	4.7	4.7
RN2424	10	10
RN2425	0.47	10
RN2426	1	10
RN2427	2.2	10



Weight : 0.012g

MAXIMUM RATINGS ( $T_a = 25^\circ C$ )

CHARACTERISTIC	SYMBOL	RATING	UNIT	
Collector-Base Voltage	RN2421~2427	$V_{CB0}$	-50 V	
Collector-Emitter Voltage		$V_{CEO}$	-50 V	
Emitter-Base Voltage	RN2421~2424	$V_{EBO}$	-10 V	
			RN2425, 2426	-5 V
			RN2427	-6 V
Collector Current	RN2421~2427	$I_C$	-800 mA	
Collector Power Dissipation		$P_C$	200 mW	
Junction Temperature		$T_j$	150 °C	
Storage Temperature Range		$T_{stg}$	-55~150 °C	

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	RN2421~2427	ICBO	V <sub>CB</sub> = -50V, I <sub>E</sub> = 0	—	—	-100	nA
		ICEO	V <sub>CE</sub> = -50V, I <sub>B</sub> = 0	—	—	-500	
Emitter Cut-off Current	RN2421	I <sub>EBO</sub>	V <sub>EB</sub> = -10V, I <sub>E</sub> = 0	-3.85	—	-7.14	mA
	RN2422			-1.75	—	-3.25	
	RN2423			-0.82	—	-1.52	
	RN2424		-0.38	—	-0.71		
	RN2425		V <sub>EB</sub> = -5V, I <sub>C</sub> = 0	-0.365	—	-0.682	
	RN2426			-0.35	—	-0.65	
	RN2427		V <sub>EB</sub> = -6V, I <sub>C</sub> = 0	-0.378	—	-0.703	
DC Current Gain	RN2421	h <sub>FE</sub>	V <sub>CE</sub> = -1V I <sub>C</sub> = -100mA	60	—	—	—
	RN2422			65	—	—	
	RN2423			70	—	—	
	RN2424			90	—	—	
	RN2425			90	—	—	
	RN2426			90	—	—	
	RN2427			90	—	—	
Collector-Emitter Saturation Voltage	RN2421	V <sub>CE (sat)</sub>	I <sub>C</sub> = -50mA, I <sub>B</sub> = -2mA	—	—	-0.25	V
	RN2422~2427		I <sub>C</sub> = -50mA, I <sub>B</sub> = -1mA				
Input Voltage (ON)	RN2421	V <sub>I (ON)</sub>	V <sub>CE</sub> = -0.2V I <sub>C</sub> = -100mA	-1.0	—	-3.5	V
	RN2422			-1.4	—	-4.5	
	RN2423			-2.0	—	-6.5	
	RN2424			-3.0	—	-12	
	RN2425			-0.6	—	-2.0	
	RN2426			-0.7	—	-2.5	
	RN2427			-1.0	—	-3.0	
Input Voltage (OFF)	RN2421~2424	V <sub>I (OFF)</sub>	V <sub>CE</sub> = -5V I <sub>C</sub> = -0.1mA	-0.8	—	-1.3	V
	RN2425, 2426			-0.4	—	-0.8	
	RN2427			-0.5	—	-1.0	
Transition Frequency	RN2421~2427	f <sub>T</sub>	V <sub>CE</sub> = -5V, I <sub>C</sub> = -20mA	—	200	—	MHz
Collector Output Capacitance	RN2421~2427	C <sub>ob</sub>	V <sub>CB</sub> = -10V, I <sub>E</sub> = 0 f = 1MHz	—	13	—	pF
Input Resistor	RN2421	R <sub>1</sub>		0.7	1.0	1.3	kΩ
	RN2422			1.54	2.2	2.86	
	RN2423			3.29	4.7	6.11	
	RN2424			7	10	13	
	RN2425			0.329	0.47	0.61	
	RN2426			0.7	1.0	1.3	
	RN2427			1.54	2.2	2.86	
Input Ratio	RN2421~2424	R <sub>1</sub> / R <sub>2</sub>		0.9	1.0	1.1	—
	RN2425			0.0423	0.047	0.0517	
	RN2426			0.09	0.1	0.11	
	RN2427			0.2	0.22	0.24	

