

SILICON TRANSISTOR

2SC1927

NPN SILICON EPITAXIAL DUAL TRANSISTOR FOR DIFFERENTIAL AMPLIFIER AND ULTRA HIGH SPEED SWITCHING INDUSTRIAL USE

DESCRIPTION

The 2SC1927 is an NPN silicon epitaxial dual transistor that consists of two chips equivalent to the 2SC1275, and is designed for differential amplifier and ultra-high-speed switching applications.

ABSOLUTE MAXIMUM RATINGS $(T_A = 25 \degree C)$

PARAMETER	SYMBOL	RATINGS	UNIT	
Collector to Base Voltage	Vсво	30	V	
Collector to Emitter Voltage	VCEO	14	V	
Emitter to Base Voltage	VEBO	3.0	V	
Collector Current	Ic	50	mA	
Collector Dissipation	Pc	200	mW/unit	
Total Power Dissipation	Рт	300	mW	
Junction Temperature	Tj	200	°C	
Storage Temperature	T _{stg}	-65 to +200	°C	

1E 2E

1B

2B

PACKAGE DIMENSIONS

ELECTRICAL CHARACTERISTICS (TA = 25 °C)

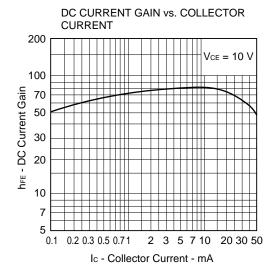
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	Ices	Vce = 15 V, Rbe = 0	e da	41	50	nA
Emitter Cut-off Current	Ієво	V _{EB} = 2.0 V, I _C = 0	W.	M.D.	50	nA
DC Current Gain	hfE	VcE = 10 V, Ic = 10 mA	25	80	200	
hre Ratio	hFE1/hFE2	VcE = 10 V, Ic = 10 mA *1	0.8		1.0	
Difference of Base to Emitter Voltage	ΔVве	VcE = 10 V, Ic = 10 mA			30	mV
Gain Bandwidth Product	fτ	VcE = 10 V, Ic = 10 mA *2	1.5	2.0		GHz
Output Capacitance	Соь	VcB = 10 V, IE = 0, f = 1.0 MHz *3		1.1	1.5	pF

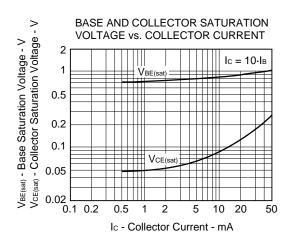
- * 1. hfe1 is the smaller hfe value of the 2 transistors.
- 2. Sampling check shall be done on a production lot base using a TO-18 packaged device (equivalent to the 2SC1275).
- 3. Measured with a 3-terminal bridge, terminals other than the collector and base of the device under test should be connected to the guard terminal of the bridge.

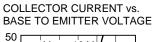


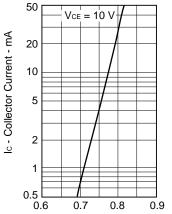
NEC

TYPICAL CHARACTERISTICS (TA = 25 °C)

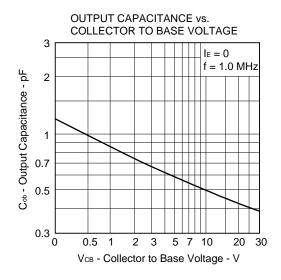




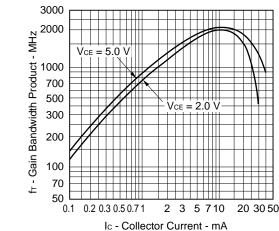








GAIN BANDWIDTH PRODUCT vs. COLLECTOR CURRENT



NEC 2SC1927

[MEMO]

NEC 2SC1927

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Standard: Computers, office equipment, communications equipment, test and measurement equipment, audio and visual equipment, home electronic appliances, machine tools, personal electronic equipment and industrial robots

Special: Transportation equipment (automobiles, trains, ships, etc.), traffic control systems, anti-disaster systems, anti-crime systems, safety equipment and medical equipment (not specifically designed for life support)

Specific: Aircrafts, aerospace equipment, submersible repeaters, nuclear reactor control systems, life support systems or medical equipment for life support, etc.

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Anti-radioactive design is not implemented in this product.

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