NPN Epitaxial Planar Silicon Transistor



2SC4272

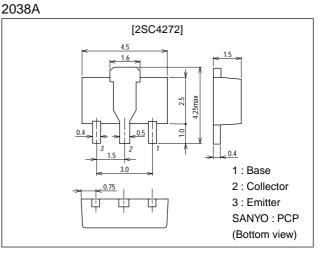
# 27MHz CB Transceiver Driver Applications

### Features

• Small size making it easy to provide high-density, small-sized hybrid ICs.

## Package Dimensions

unit:mm



# **Specifications**

#### Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V <sub>CBO</sub>		75	V
Collector-to-Emitter Voltage	VCER	R <sub>BE</sub> =150Ω	75	V
Collector-to-Emitter Voltage	VCEO		45	V
Emitter-to-Base Voltage	VEBO		5	V
Collector Current	۱ <sub>C</sub>		1.0	A
Collector Current (Pulse)	ICP		1.5	A
Collector Dissipation	PC	Mounted on ceramic board (250mm <sup>2</sup> ×0.8mm)	1.3	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

#### **Electrical Characteristics at Ta = 25°C**

Parameter	Symbol	Conditions	Ratings			Unit
Falantelei			min	typ	max	Onit
Collector Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> =40V, I <sub>E</sub> =0			1.0	μΑ
Emitter Cutoff Current	IEBO	$V_{EB}=4V, I_{C}=0$			1.0	μΑ
DC Current Gain	h <sub>FE</sub> *	$V_{CE}=5V, I_{C}=500$ mA	60*		320*	
Gain-Bandwidth Product	fT	V <sub>CE</sub> =10V, I <sub>C</sub> =50mA	180	250		MHz
Output Capacitance	Cob	V <sub>CB</sub> =10V, f=1MHz		15		pF

\* : The 2SC4272 are classified by 500mA  $h_{FE}$  as follows :  $\begin{bmatrix} 60 & D & 120 \end{bmatrix}$  100  $\begin{bmatrix} E & 200 \end{bmatrix}$  160  $\begin{bmatrix} F & 320 \end{bmatrix}$ 

Marking : CH

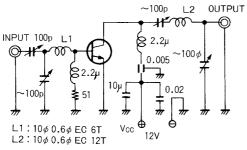
h<sub>FE</sub> rank : D, E, F

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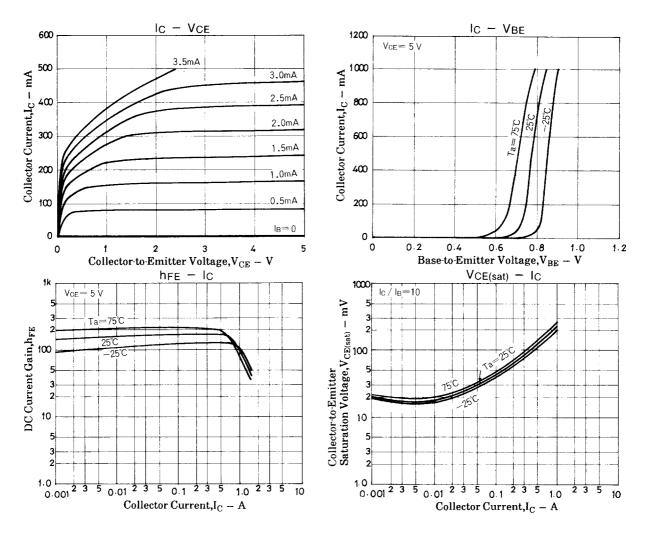
SANYO Electric Co., Ltd. Semiconductor Bussiness Headquaters TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

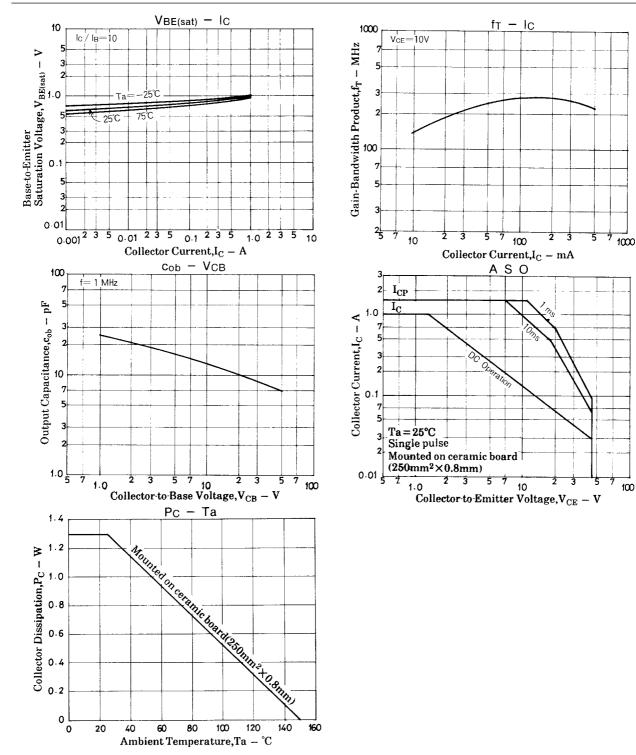
Parameter	Symbol	Conditions		Ratings		
			min	typ	max	Unit
Output Power	Po	V <sub>CC</sub> =12V, f=27MHz, Pin=35mW	1.0	1.8		W
Collector Efficiency	ης	See specified test circuit.	60			%
Collector-to-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA		0.2	0.6	V
Base-to-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA		0.9	1.2	V
Collector-to-Base Breakdown Voltage	V(BR)CBO	I <sub>C</sub> =10µA, I <sub>E</sub> =0	75			V
Collector-to-Emitter Breakdown Voltage	V <sub>(BR)</sub> CER	I <sub>C</sub> =1mA, R <sub>BE</sub> =150Ω	75			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I <sub>C</sub> =1mA, R <sub>BE</sub> =∞	45			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	I <sub>E</sub> =10μA, I <sub>C</sub> =0	5			V

### **Collector Efficiency Test Circuit**



Unit (resistance :  $\Omega$ , capacitance : F)





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