

NPN SILICON RF TRANSISTOR **2SC4571**

NPN EPITAXIAL SILICON RF TRANSISTOR FOR UHF TUNER OSC/MIX 3-PIN SUPER MINIMOLD

DESCRIPTION

The 2SC4571 is a low supply voltage transistor designed for UHF OSC/MIX.

It is suitable for a high density surface mount assembly since the transistor has been applied super minimold package.

FEATURES

- High Gain Bandwidth Product $f_T = 5.0 \text{ GHz TYP.} @ V_{CE} = 5 \text{ V}, \text{ Ic} = 5 \text{ mA}, f = 1 \text{ GHz}$
- Low Output Capacitance $C_{ob} = 0.9 \text{ pF TYP. } @ \text{ V}_{CB} = 5 \text{ V}, \text{ I}_{E} = 0 \text{ mA}, \text{ f} = 1 \text{ MHz}$
- 3-pin super minimold Package

★ ORDERING INFORMATION

Part Number	Quantity	Supplying Form	
2SC4571	50 pcs (Non reel)	• 8 mm wide embossed taping	
2SC4571-T1	3 kpcs/reel	Pin 3 (collector) face to perforation side of the tape	

Remark To order evaluation samples, contact your nearby sales office.

The unit sample quantity is 50 pcs.

ABSOLUTE MAXIMUM RATINGS (TA = +25°C)

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	Vсво	20	V
Collector to Emitter Voltage	Vceo	12	V
Emitter to Base Voltage	Vebo	3	V
Collector Current	lc	60	mA
Total Power Dissipation	Ptot Note	120	mW
Junction Temperature	Tj	125	°C
Storage Temperature	Tstg	–55 to +125	°C

Note Free air

Caution Observe precautions when handling because these devices are sensitive to electrostatic discharge.

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The mark \star shows major revised points.

ELECTRICAL CHARACTERISTICS (TA = +25°C)

Parameter	Symbol	Test Conditions	MIN.	TYP.	MAX.	Unit
DC Characteristics						
Collector Cut-off Current	Ісво	Vсв = 15 V, IE = 0 mA	-	-	100	nA
Emitter Cut-off Current	Іево	V _{EB} = 1 V, Ic = 0 mA	-	-	100	nA
Collector Saturation Voltage	VcE(sat)	hfe = 10, lc = 5 mA	١	١	0.5	V
DC Current Gain	hfe Note 1	Vce = 5 V, Ic = 5 mA	40	100	200	-
RF Characteristics						
Gain Bandwidth Product	f⊤	Vce = 5 V, lc = 5 mA, f = 1.0 GHz	-	5.0	-	GHz
Insertion Power Gain	S _{21e} ²	Vce = 5 V, lc = 5 mA, f = 1.0 GHz	5.0	-	-	dB
Output Capacitance	Cob Note 2	Vсв = 5 V, I _E = 0 mA, f = 1.0 MHz	-	0.9	1.2	pF

Notes 1. Pulse measurement: PW \leq 350 μ s, Duty Cycle \leq 2%

2. Collector to base capacitance when the emitter grounded

hfe CLASSIFICATION

Rank	T75	T76	T77
Marking	T75	T76	T77
hfe Value	40 to 80	60 to 120	100 to 200



Remark The graphs indicate nominal characteristics.



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★ S-PARAMETERS

S-parameters/Noise parameters are provided on the NEC Compound Semiconductor Devices Web site in a form (S2P) that enables direct import to a microwave circuit simulator without keyboard input.

Click here to download S-parameters.

 $[\mathsf{RF} \text{ and Microwave}] \rightarrow [\mathsf{Device Parameters}]$

URL http://www.ncsd.necel.com/

PACKAGE DIMENSIONS *

3-PIN SUPER MINIMOLD PACKAGE (UNIT: mm)



PIN CONNECTIONS

- 1. Emitter
- Base
 Collect
- Collector

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