

# EC3H08B

# High-Frequency Amp Applications, Osc. Applications

#### **Preliminary**

#### **Features**

• Low noise : NF=1.6dB typ (f=2GHz).

• High cut-off frequency: fT=10.0GHz typ (VCE=1V). : fT=12.0GHz typ (VCE=3V).

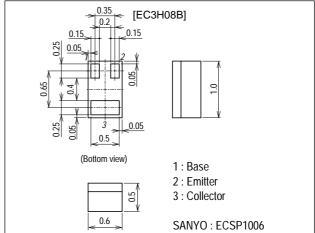
· Low operating voltage.

• High Gain :  $|S21e|^2=9.5dB$  typ (f=2GHz)

• Ultraminiature (1006 size) and thin (0.5mm) leadless package.

# **Package Dimensions**

unit : mm 0000



# **Specifications**

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to- Base Voltage	VCBO		9	V
Collector-to-Emitter Voltage	VCEO		4	V
Emitter-to-Base Voltage	VEBO		2	V
Collector Current	IC		20	mA
Collector Dissipation	PC		80	mW
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

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

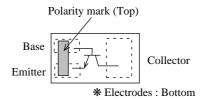
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Unit
Collector Cutoff Current	ІСВО	VCB=5V, IE=0			1.0	μΑ
Emitter Cutoff Current	IEBO	VEB=1V, IC=0			10	μΑ
DC Current Gain	hFE	V <sub>CE</sub> =1V, I <sub>C</sub> =5mA	100		160	
Gain-Bandwidth Product	f <sub>T</sub> (1)	VCE=1V, IC=3mA	8.0	10.0		GHz
Gain-Bandwidth Product	f <sub>T</sub> (2)	V <sub>CE</sub> =3V, I <sub>C</sub> =7mA	10.0	12.0		GHz
Output Capacitance	Cob	V <sub>CB</sub> =1V, f=1MHz		0.4	0.55	pF
Reverse Transfer Capacitance	Cre	V <sub>CB</sub> =1V, f=1MHz		0.27	0.40	pF
Forward Transfer Gain	S21e   2(1)	V <sub>CE</sub> =1V, I <sub>C</sub> =3mA, f=2GHz	8.0	9.5		dB
	S21e   2(2)	V <sub>CE</sub> =3V, I <sub>C</sub> =7mA, f=2GHz	9.0	10.5		dB
Noise Figure	NF	VCE=1V, IC=3mA, f=2GHz		1.6	2.5	dB

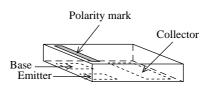
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### Marking: L

## Electrical connection (TOP VIEW)







This product adopts a high-frequency process. Please be careful when handling it beause it is susceptible to static electricity.

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