

To our customers,

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## Old Company Name in Catalogs and Other Documents

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On April 1<sup>st</sup>, 2010, NEC Electronics Corporation merged with Renesas Technology Corporation, and Renesas Electronics Corporation took over all the business of both companies. Therefore, although the old company name remains in this document, it is a valid Renesas Electronics document. We appreciate your understanding.

Renesas Electronics website: <http://www.renesas.com>

April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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## Notice

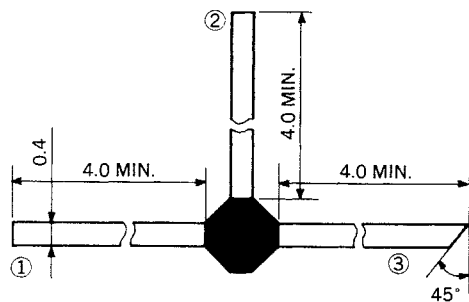
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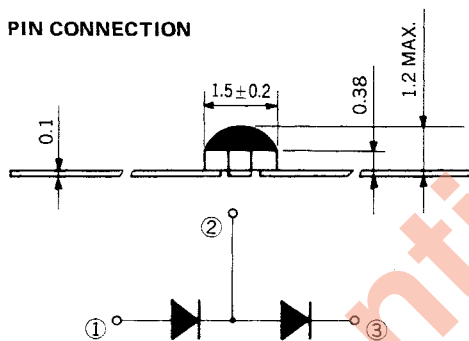
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### X BAND SINGLE BALANCED MIXER

#### PACKAGE DIMENSIONS (Unit: mm)



#### PIN CONNECTION



#### FEATURES

- X band single balanced mixer diode.
- Single chip-monolithic.
- Wide-band.
- Low terminal capacitance.  
( $C_t = 0.26 \text{ pF MAX. @ } V_R = 0 \text{ V, } f = 1.0 \text{ MHz}$ )
- Small size.
- Low cost.

#### ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

Reverse Voltage	$V_R$	4.0	V
Peak Reverse Voltage	$V_{RM}$	4.4	V
Forward Current	$I_F$	50	mA
Peak Forward Current	$I_{FM}$	150	mA
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-65 to +150	$^\circ\text{C}$
Soldering Temperature		230*	$^\circ\text{C}$

\* Within 10 s

#### ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Forward Voltage	$V_{F1}$			1.0	V	$I_F = 50 \text{ mA}$
Forward Voltage	$V_{F2}$		0.67	0.8	V	$I_F = 1.0 \text{ mA}$
Forward Voltage	$\Delta V_{F2}^{*1}$			0.02	V	$I_F = 1.0 \text{ mA}$
Total Capacitance	$C_t^{*2}$		0.22	0.26	pF	$V_R = 0, f = 1.0 \text{ MHz}$
Total Capacitance	$\Delta C_t^{*1}$			0.05	pF	$V_R = 0, f = 1.0 \text{ MHz}$

\*1 ; Difference of  $V_F, C_t$

\*2 ; ①-②, ②-③ terminal

TYPICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

