

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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NPN SILICON EPITAXIAL TRANSISTOR  
FOR UHF-BAND POWER AMPLIFIER  
INDUSTRIAL USE

DESCRIPTION

The 2SC2762 is an NPN silicon epitaxial transistor designed for UHF-band medium power amplifiers.

FEATURE

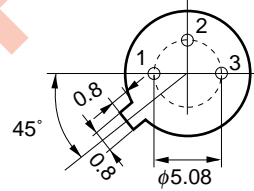
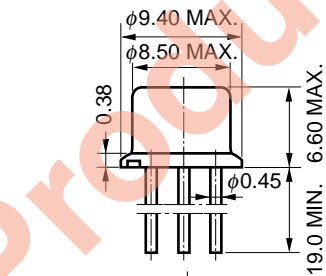
Medium power output

$P_{out} = 1.4 \text{ W TYP. @} f = 500 \text{ MHz, } V_{CC} = 12.6 \text{ V, } P_{in} = 0.25 \text{ W}$

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

PARAMETER	SYMBOL	RATINGS	UNIT
Collector to Base Voltage	$V_{CBO}$	35	V
Collector to Emitter Voltage	$V_{CEO}$	18	V
Emitter to Base Voltage	$V_{EBO}$	3.0	V
Collector Current	$I_C$	0.4	A
Total Power Dissipation	$P_{T(TA = 25 \text{ }^\circ\text{C})}$	800	mW
Total Power Dissipation	$P_{T(TC = 25 \text{ }^\circ\text{C})}$	7	W
Junction Temperature	$T_j$	200	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-65 to +200	$^\circ\text{C}$

PACKAGE DIMENSIONS  
(in millimeters)



PIN CONNECTIONS

- 1. Emitter
- 2. Base
- 3. Collector

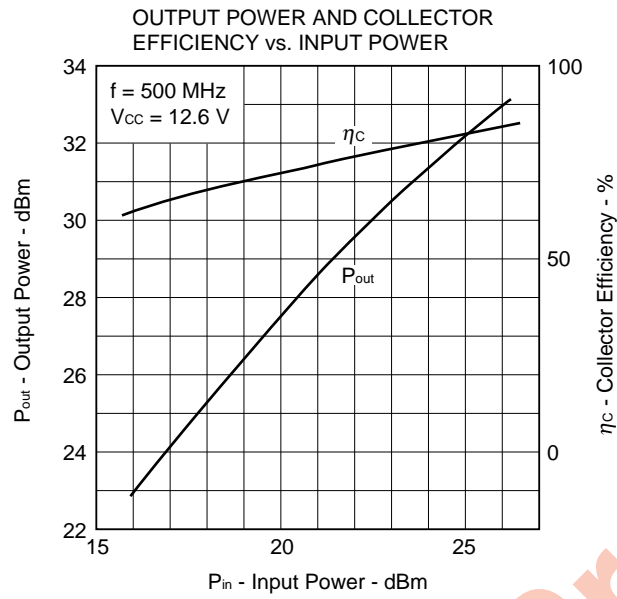
All leads insulated from case

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

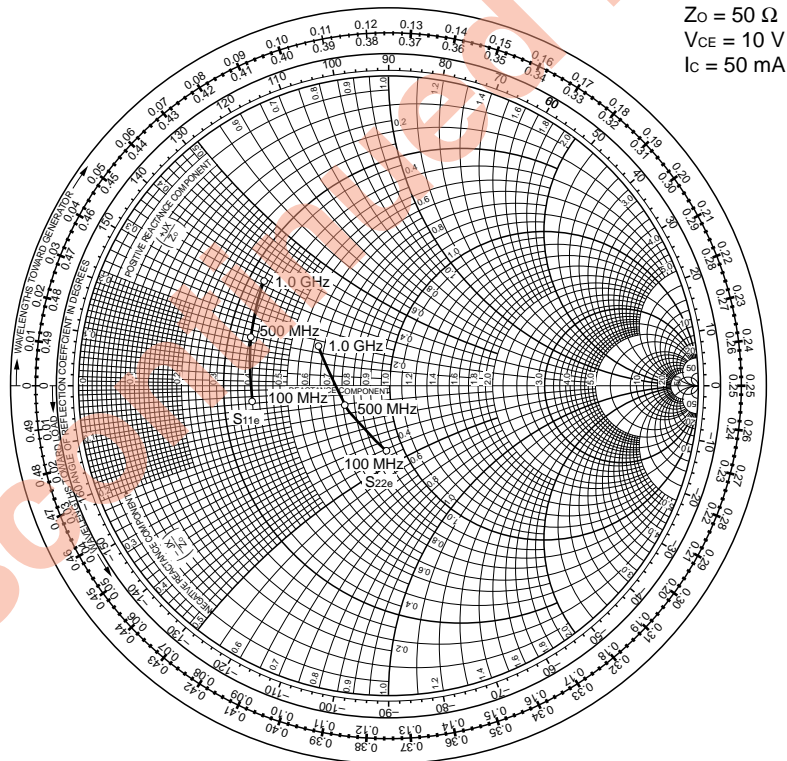
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 20 \text{ V, } I_E = 0$			0.1	mA
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 2 \text{ V, } I_C = 0$			0.1	mA
DC Current Gain	$h_{FE}$	$V_{CE} = 10 \text{ V, } I_C = 100 \text{ mA (pulse)}$	20	60	200	
Output Capacitance	$C_{ob}$	$V_{CB} = 10 \text{ V, } I_E = 0, f = 1.0 \text{ MHz}^*$		2.5	4.0	pF
Output Power	$P_{out}$	$f = 500 \text{ MHz, } V_{CC} = 12.6 \text{ V, } P_{in} = 24 \text{ dBm}$	30	31.5		dBm
Collector Efficiency	$\eta_C$	$f = 500 \text{ MHz, } V_{CC} = 12.6 \text{ V, } P_{in} = 24 \text{ dBm}$	60	80		%

\* Emitter and case should be grounded.

TYPICAL CHARACTERISTICS (TA = 25 °C)



S-PARAMETER



[MEMO]

Discontinued Product

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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.