

To our customers,

Old Company Name in Catalogs and Other Documents

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

April 1st, 2010
Renesas Electronics Corporation

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

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VARACTOR DIODE 1S2207(B)

DESCRIPTION The 1S2207(B) is a hyper-abrupt junction type voltage-variable capacitance diode. It is designed for electronic tuning circuit applications in VHF and UHF bands and features high Q, high capacitance ratio and high reliability.

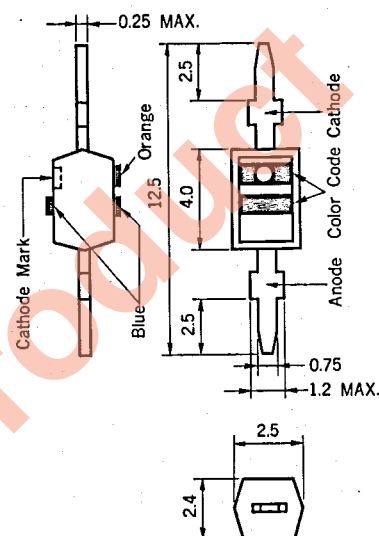
FEATURES

- High Q.
- High capacitance ratio.
- Low leakage current.

ABSOLUTE MAXIMUM RATINGS (Ta = 25 °C)

Peak Reverse Voltage	V_{RM}	27	V
DC Reverse Voltage	V_R	25	V
Storage Temperature	T_{stg}	-55 to +125	°C

PACKAGE DIMENSIONS in millimeters (inches)



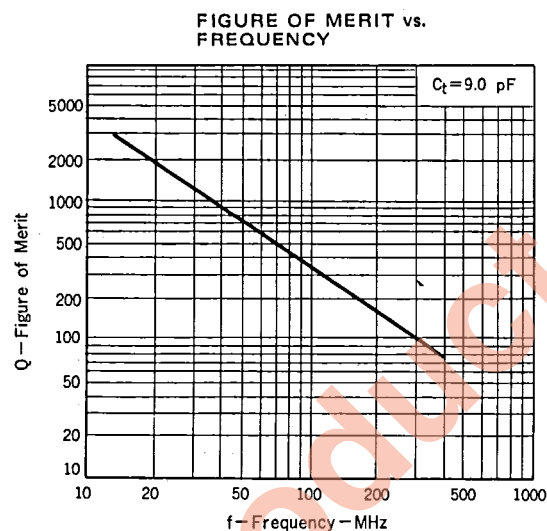
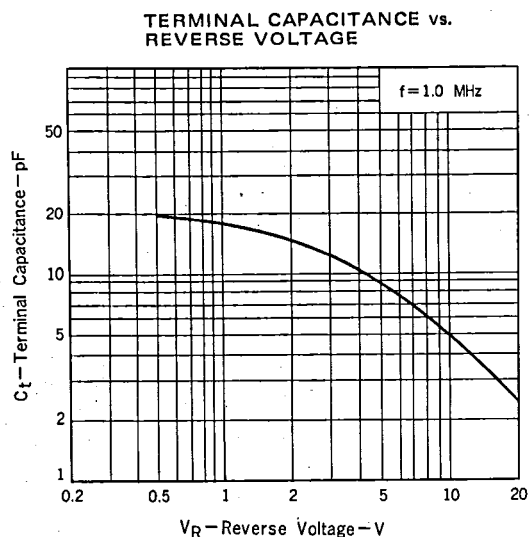
ELECTRICAL CHARACTERISTICS (Ta = 25 °C)

SYMBOL	CHARACTERISTIC	NC			KC, LC, MC			UNIT	TEST CONDITIONS
		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		
V_R	Reverse Voltage	25			25			V	$I_R = 1.0 \mu A$
C_{t2}	Terminal Capacitance	11.0		17.0				pF	$V_R = 2.0 V, f = 1.0 MHz$
C_{t3}					9.50		14.0		$V_R = 3.0 V, f = 1.0 MHz$
C_{t6}					5.75		9.75		$V_R = 6.0 V, f = 1.0 MHz$
C_{t10}		3.8		6.4	3.80		6.40		$V_R = 10 V, f = 1.0 MHz$
N1	Capacitance Ratio	2.5		3.10					C_{t2}/C_{t10}
N2					2.20		2.60		C_{t3}/C_{t10}
r_s	Series Resistance			0.6			0.6	Ω	$C_t = 9.0 pF, f = 50 MHz$

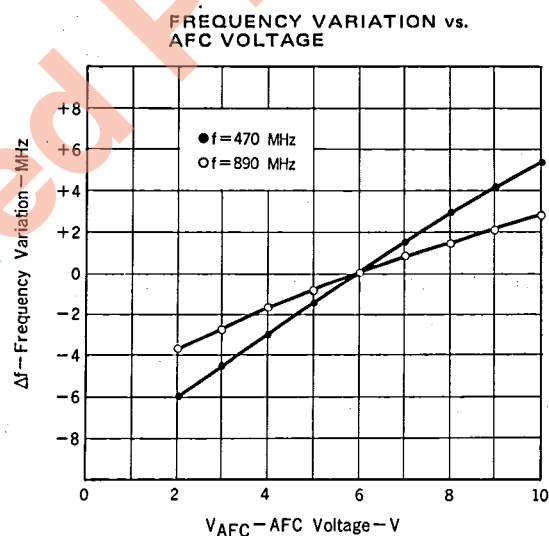
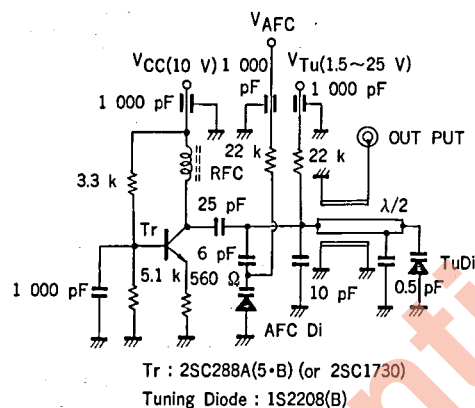
C_{t6} Classification

Rank	KC	LC	MC
C _{t6} (pF)	7.75 - 9.75	6.50 - 8.75	5.75 - 7.50

C_{t6} Test Condition: $V_R = 6.0 V, f = 1.0 MHz$

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

AFC Test Circuit



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