

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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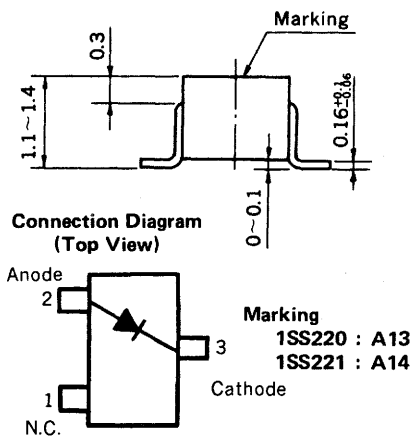
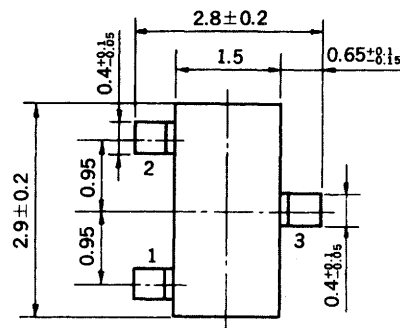
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Phase-out/Discontinued
1SS220, 1SS221

HIGH SPEED SWITCHING SILICON EPITAXIAL DIODES MINI MOLD

PACKAGE DIMENSIONS in millimeters



FEATURES

- Low capacitance: $C_t = 4.0$ pF MAX.
- High speed switching: $t_{rr} = 3.0$ ns MAX.
- Wide applications including switching, limiter, clipper.

ABSOLUTE MAXIMUM RATINGS

Maximum Voltages and Currents ($T_a = 25^\circ\text{C}$)

		1SS220	1SS221	
Peak Reverse Voltage	V_{RM}	70	100	V
DC Reverse Voltage	V_R	70	100	V
Peak Forward Current	I_{FM}	300	300	mA
Average Rectified Current	I_O	100	100	mA
DC Forward Current	I_F	100	100	mA

Maximum Temperatures

Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

Thermal Resistance

Junction to Ambient	$R_{th(j-a)}$	0.67	$^\circ\text{C/mW}$
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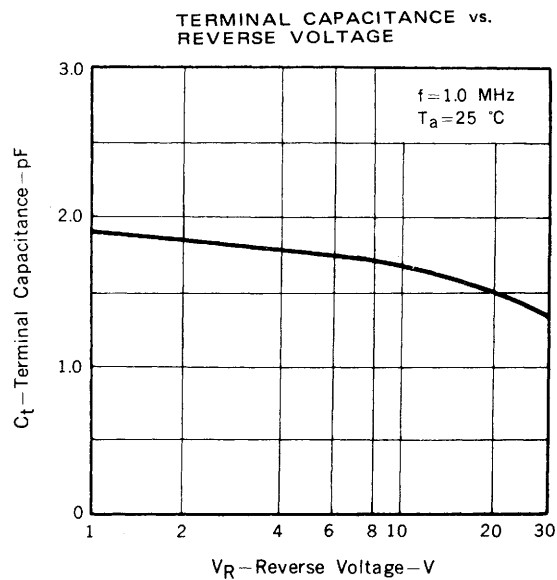
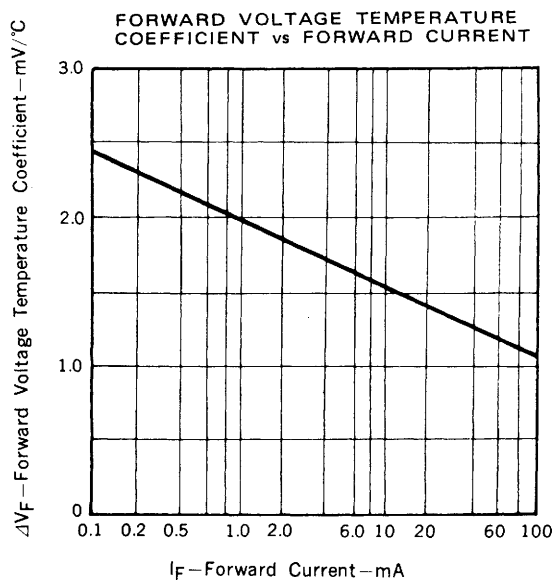
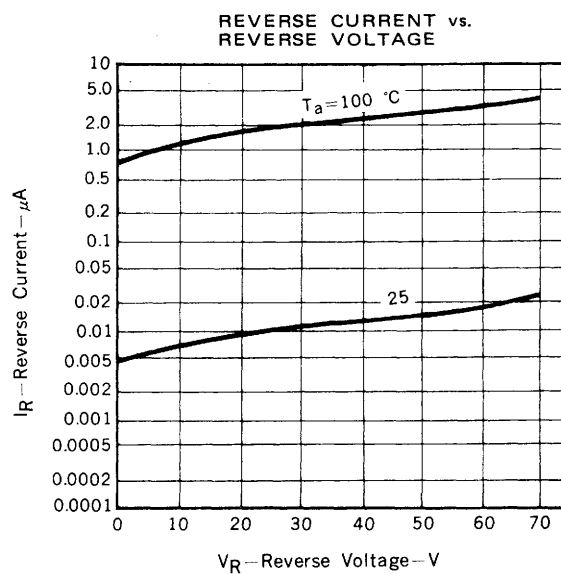
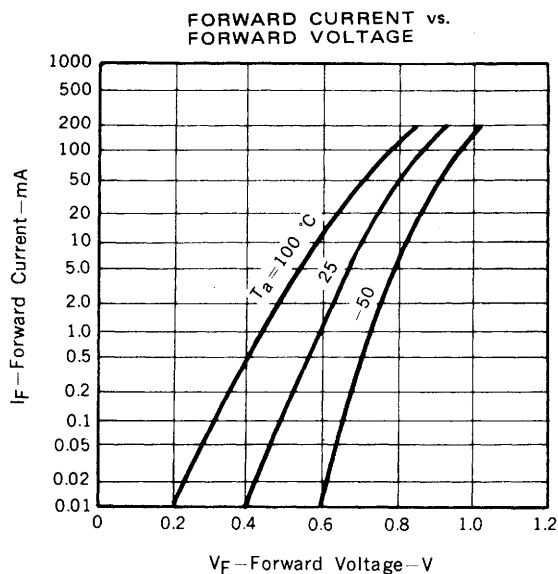
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Forward Voltage	V_{F1}		720	850	mV	$I_F = 10$ mA
	V_{F2}		850	1000	mV	$I_F = 50$ mA
	V_{F3}		950	1200	mV	$I_F = 100$ mA
Reverse Current	I_R			1.0	μA	$V_R = 70$ V
				1.0	μA	$V_R = 100$ V
Capacitance	C_t		2.0	4.0	pF	$V_R = 0$, $f = 1.0$ MHz
Reverse Recovery Time	t_{rr}			3.0	ns	$I_F = 10$ mA, $V_R = 6$ V, $R_L = 100 \Omega$, See Test Circuit.

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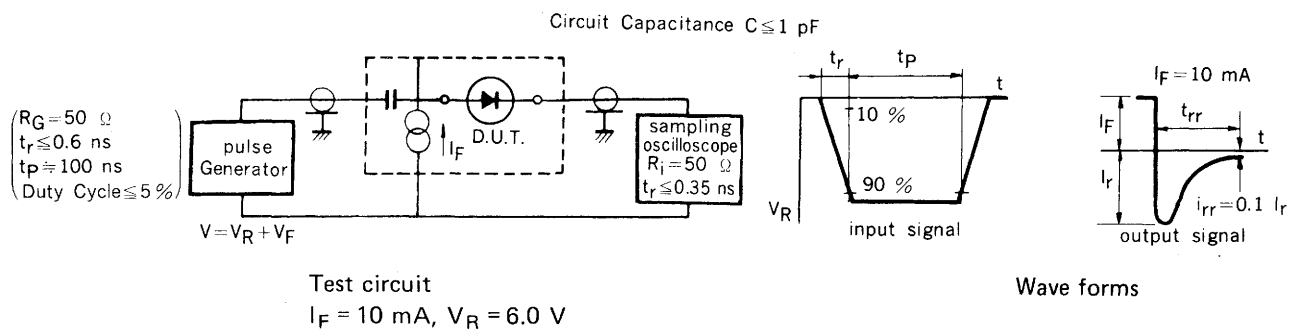
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TYPICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)



SWITCHING CHARACTERISTICS TEST CIRCUIT

Reverse recovery time : t_{rr}



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 "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": Aircraft, aerospace equipment, submersible repeaters, nuclear reactor control systems, life support systems and medical equipment for life support, etc.

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