

To our customers,

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## Old Company Name in Catalogs and Other Documents

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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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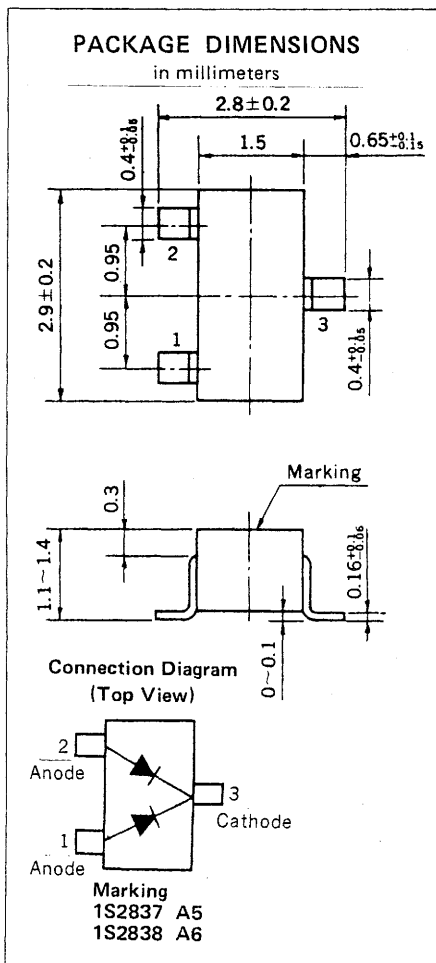
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**HIGH SPEED SWITCHING  
SILICON EPITAXIAL DOUBLE DIODES : COMMON CATHODE  
MINI MOLD**


**FEATURES**

- Low capacitance:  $C_t = 1.1$  pF TYP.
- High speed switching:  $t_{rr} = 3.0$  ns MAX.
- Wide applications including switching, limiter, clipper.
- Double diode configuration assures economical use.

**ABSOLUTE MAXIMUM RATINGS**

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

		1S2837	1S2838	
Peak Reverse Voltage	$V_{RM}$	35	75	V
DC Reverse Voltage	$V_R$	30	50	V
Surge Current (1 $\mu\text{s}$ ) *	$I_{FSM}$	6.0	6.0	A
Surge Current (1 $\mu\text{s}$ )	$I_{FSM}$	4.0	4.0	A
Peak Forward Current *	$I_{FM}$	450	450	mA
Peak Forward Current	$I_{FM}$	300	300	mA
Average Rectified Current *	$I_o$	150	150	mA
Average Rectified Current	$I_o$	100	100	mA
<b>Maximum Temperatures</b>				
Junction Temperature	$T_j$	125	125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to +125	-55 to +125	$^\circ\text{C}$
<b>Thermal Resistance</b>				
Junction to Ambient *	$R_{th(j-a)}$	1.0	1.0	$^\circ\text{C}/\text{mW}$
Junction to Ambient	$R_{th(j-a)}$	0.67	0.67	$^\circ\text{C}/\text{mW}$

\* Both diodes loaded simultaneously.

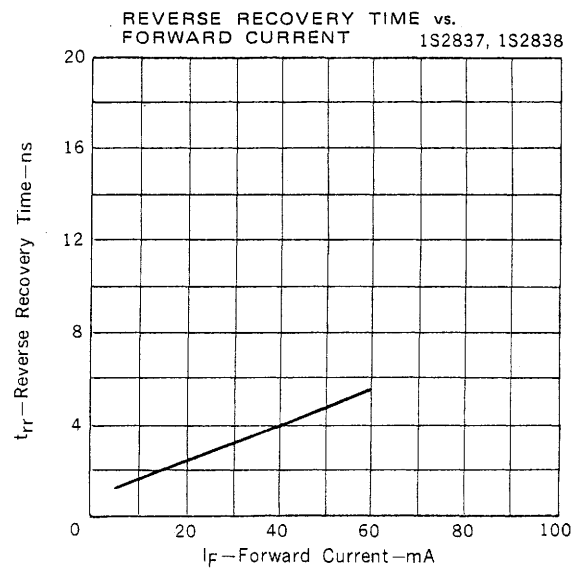
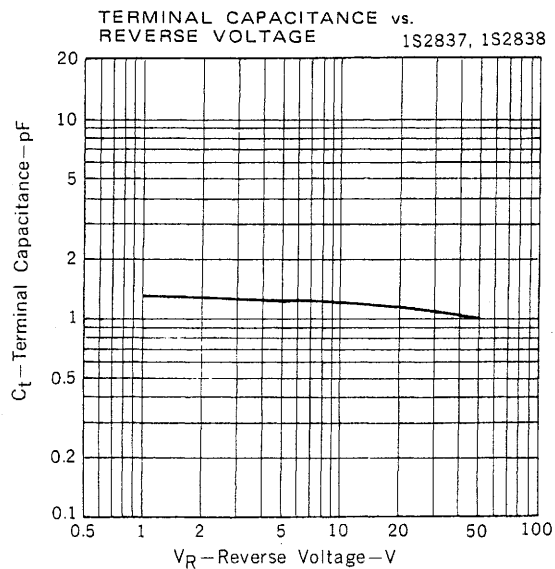
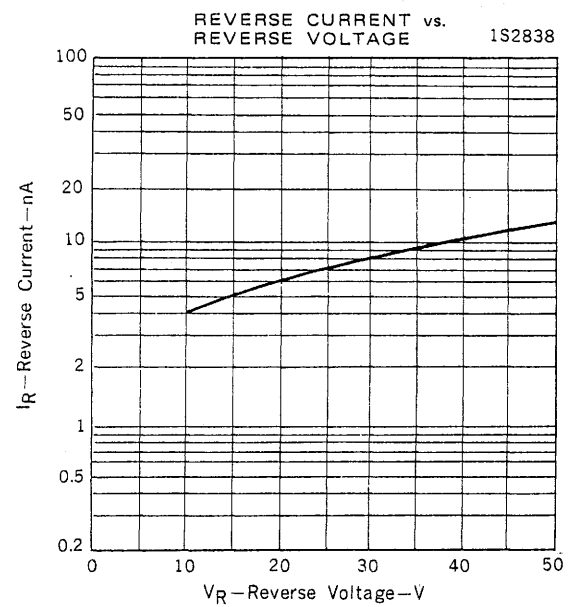
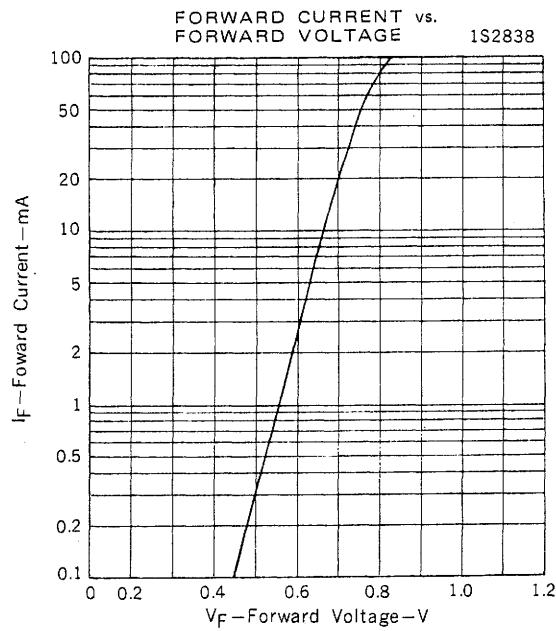
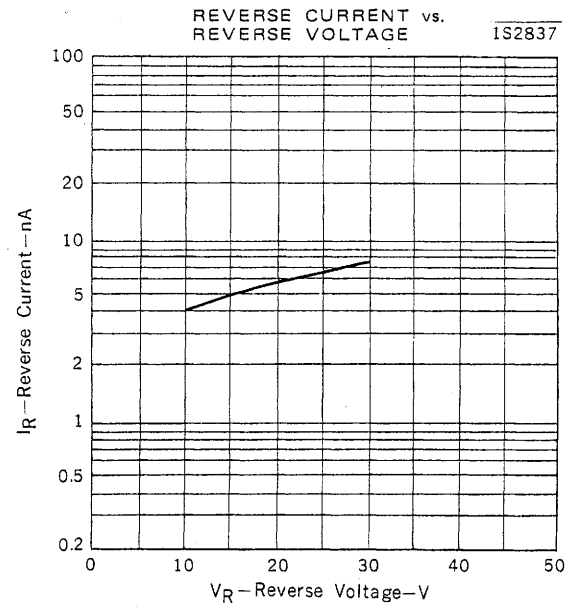
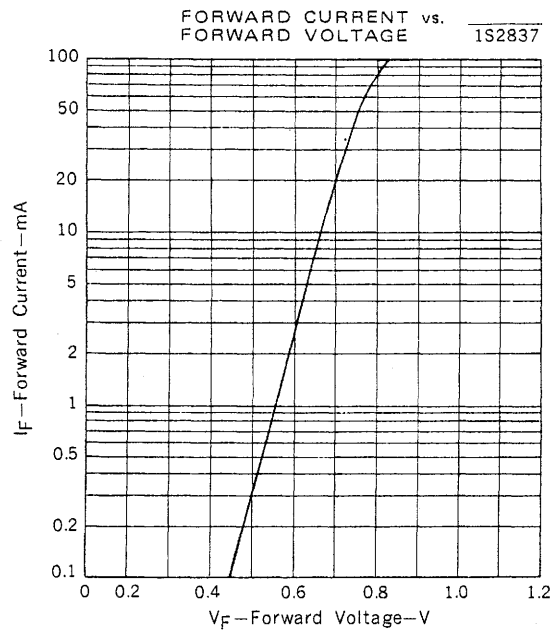
**ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )**

CHARACTERISTIC	SYMBOL	1S2837 (A5)			1S2838 (A6)			UNIT	TEST CONDITIONS
		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		
Forward Voltage	$V_{F1}$		0.67	1.0		0.67	1.0	V	$I_F = 10$ mA
	$V_{F2}$		0.75	1.1		0.75	1.1	V	$I_F = 50$ mA
	$V_{F3}$		0.85	1.2		0.85	1.2	V	$I_F = 100$ mA
Reverse Current	$I_R$			0.1				$\mu\text{A}$	$V_R = 30$ V
	$I_R$						0.1	$\mu\text{A}$	$V_R = 50$ V
Capacitance	$C_t$		1.1	4.0		1.1	4.0	pF	$V_R = 0, f = 1.0$ MHz
Reverse Recovery Time	$t_{rr}$			3.0			3.0	ns	See Test Circuit.

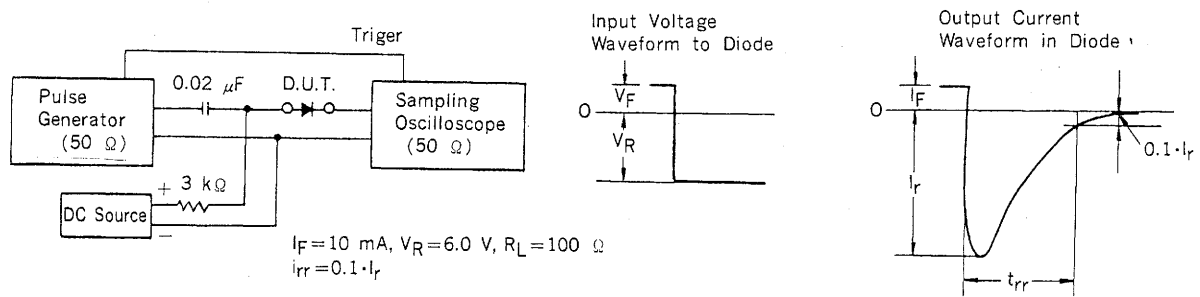
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TYPICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )



REVERSE RECOVERY TIME ( $t_{rr}$ ) TEST CIRCUIT



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