

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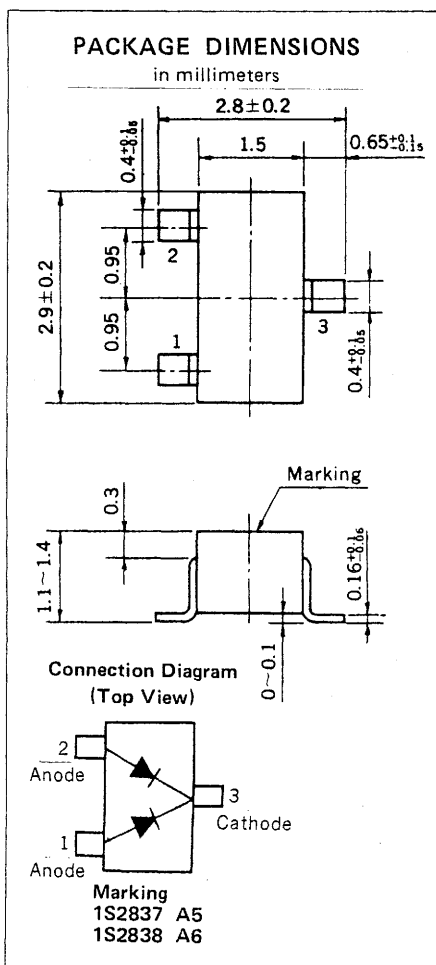
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**HIGH SPEED SWITCHING
SILICON EPITAXIAL DOUBLE DIODES : COMMON CATHODE
MINI MOLD**


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 μs) *	I_{FSM}	6.0	6.0	A
Surge Current (1 μs)	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
Maximum Temperatures				
Junction Temperature	T_j	125	125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +125	-55 to +125	$^\circ\text{C}$
Thermal Resistance				
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.

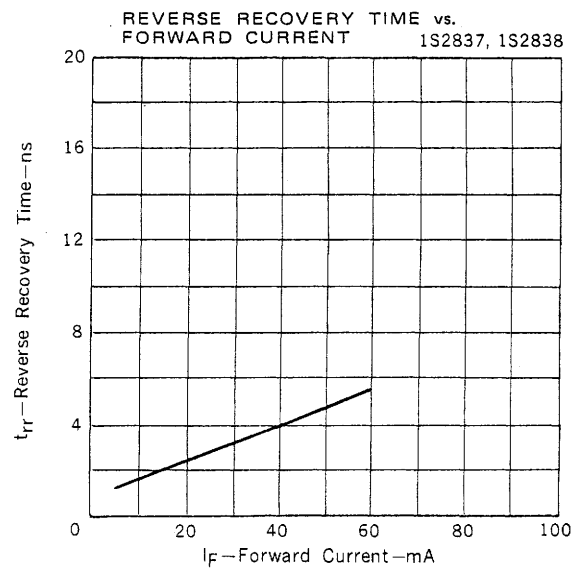
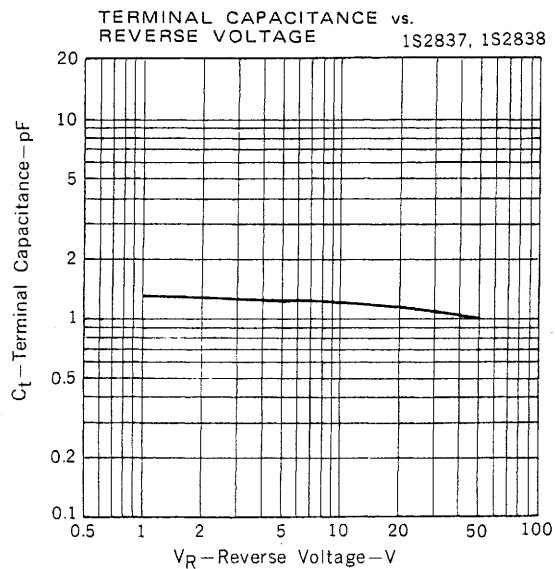
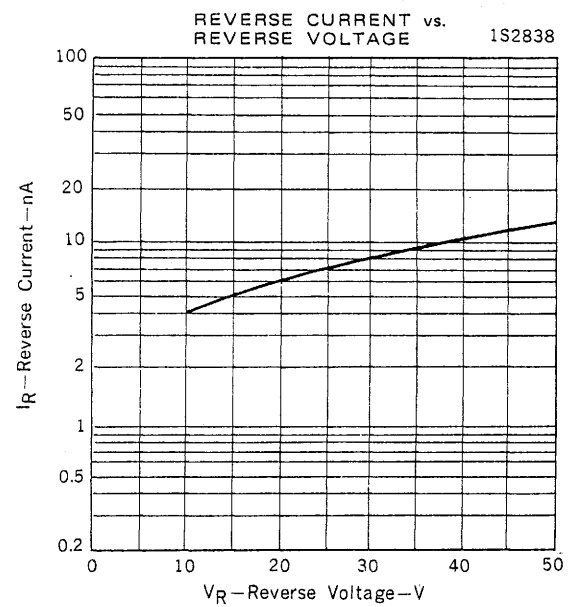
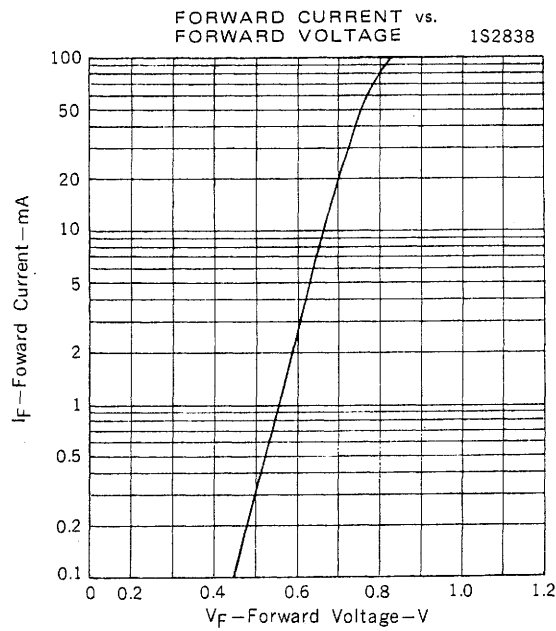
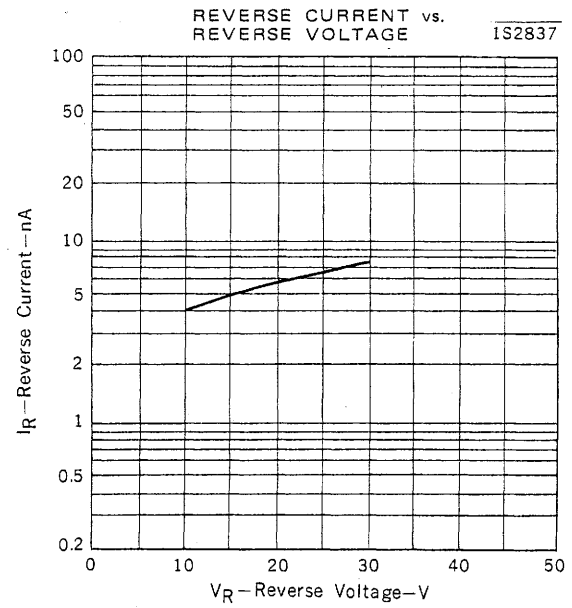
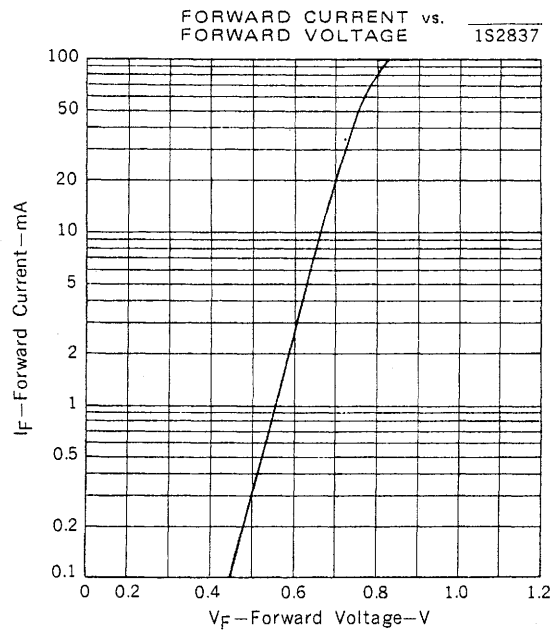
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

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				μA	$V_R = 30$ V
	I_R						0.1	μA	$V_R = 50$ 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.

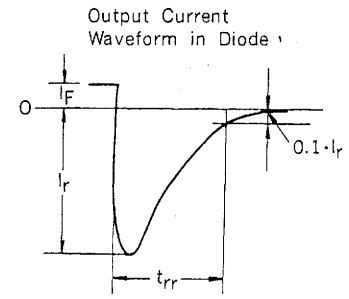
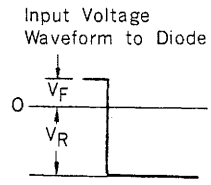
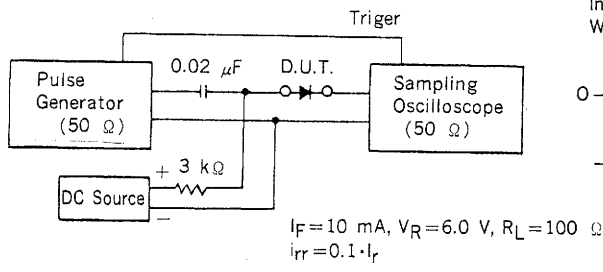
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TYPICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)



REVERSE RECOVERY TIME (t_{rr}) TEST CIRCUIT



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