

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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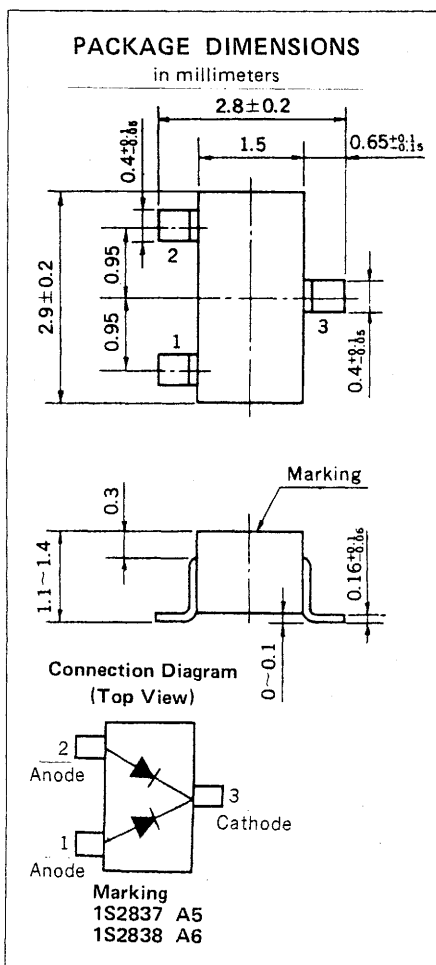
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Phase-out/Discontinued

1S2837, 1S2838

**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 ($T_a = 25$ °C)

		1S2837	1S2838	
Peak Reverse Voltage	V_{RM}	35	75	V
DC Reverse Voltage	V_R	30	50	V
Surge Current (1 μ s)*	I_{FSM}	6.0	6.0	A
Surge Current (1 μ 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
Maximum Temperatures				
Junction Temperature	T_j	125	125	°C
Storage Temperature Range	T_{stg}	-55 to +125	-55 to +125	°C
Thermal Resistance				
Junction to Ambient*	$R_{th(j-a)}$	1.0	1.0	°C/mW
Junction to Ambient	$R_{th(j-a)}$	0.67	0.67	°C/mW

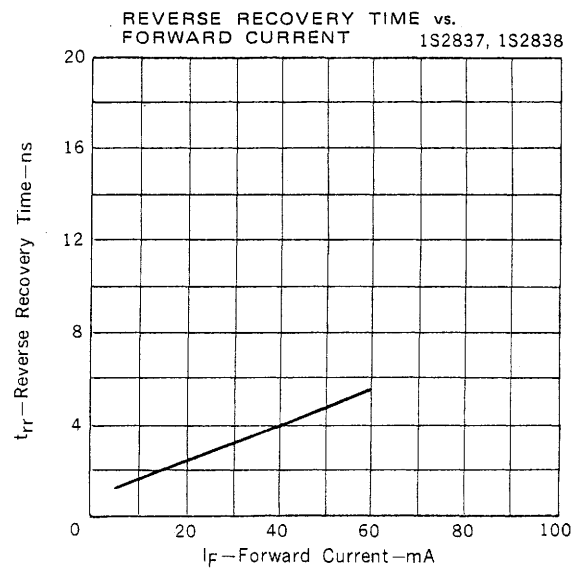
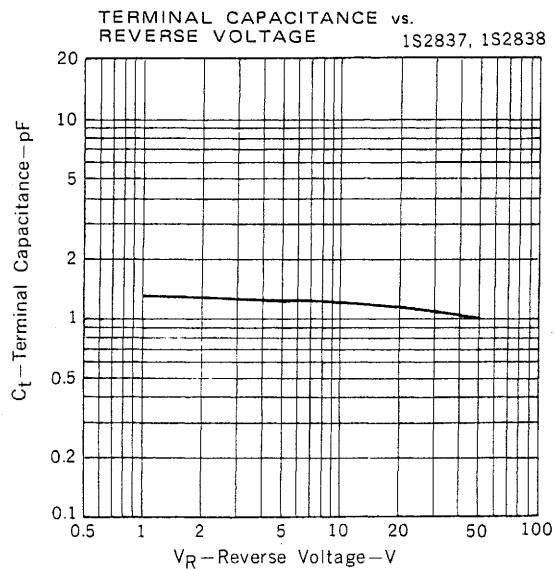
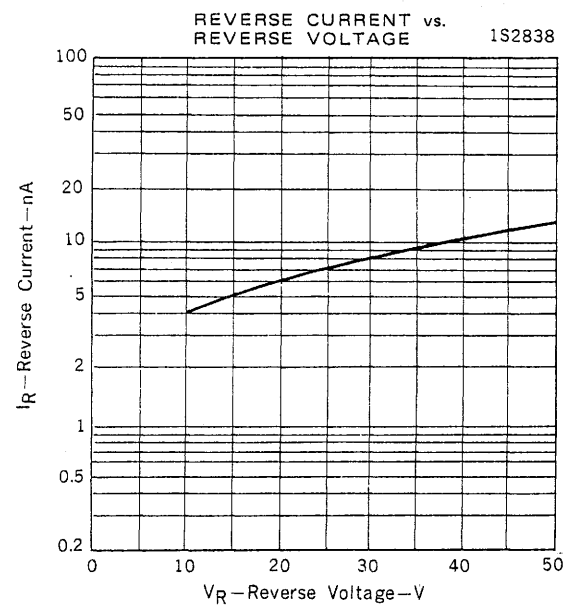
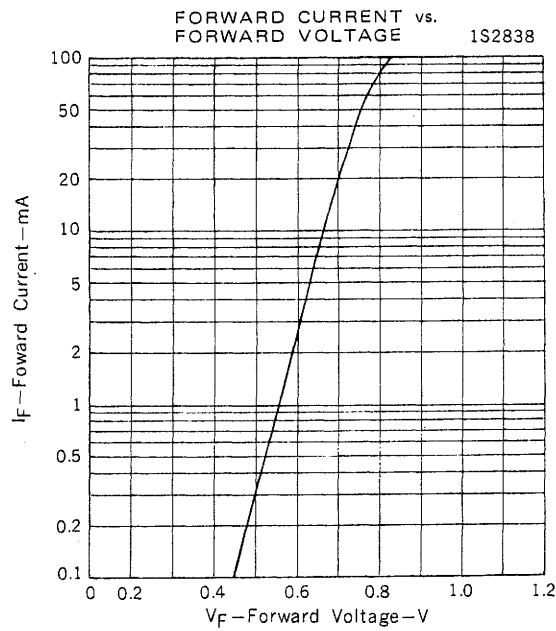
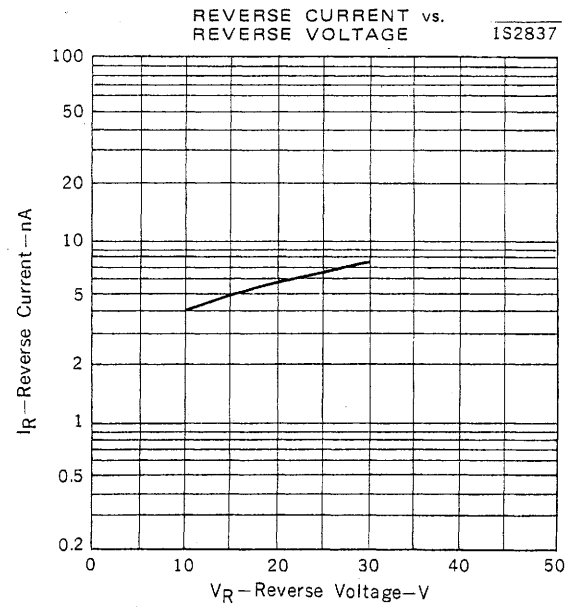
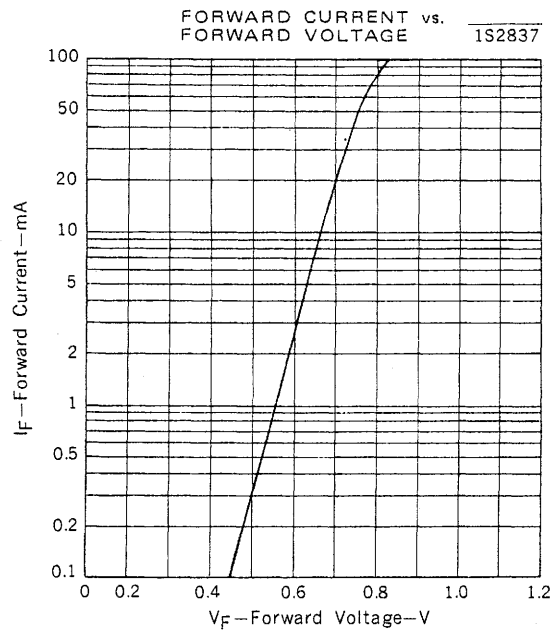
* Both diodes loaded simultaneously.

ELECTRICAL CHARACTERISTICS ($T_a = 25$ °C)

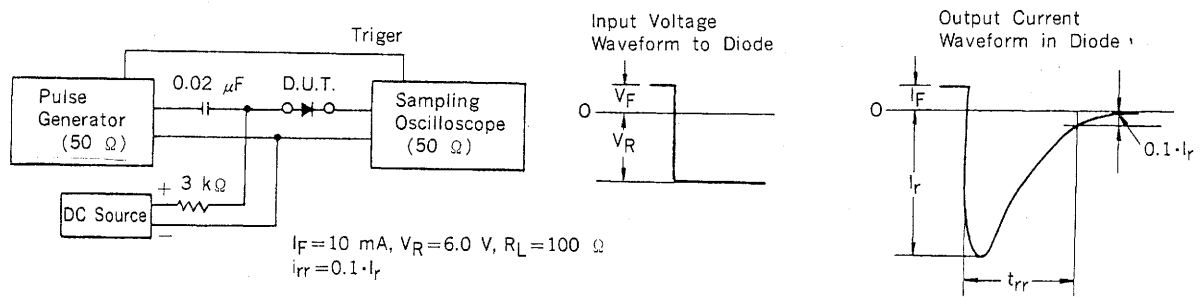
CHARACTERISTIC	SYMBOL	1S2837 (A5)			1S2838 (A6)			UNIT	TEST CONDITIONS
		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		
Forward Voltage	V_{F1}		0.67	1.0		0.67	1.0	V	$I_F = 10$ mA
	V_{F2}		0.75	1.1		0.75	1.1	V	$I_F = 50$ mA
	V_{F3}		0.85	1.2		0.85	1.2	V	$I_F = 100$ mA
Reverse Current	I_R			0.1				μ A	$V_R = 30$ V
	I_R						0.1	μ 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)



REVERSE RECOVERY TIME (t_{rr}) TEST CIRCUIT



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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)
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