LITE-ON SEMICONDUCTORS

MC2838

SURFACE MOUNT
FAST SWITCHING DIODE

REVERSE VOLTAGE – 50 Volts
FORWARD CURRENT – 0.1 Ampere

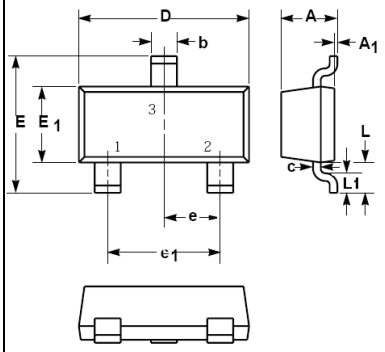
FEATURES

- Fast switching speed
- Ideally suited for automatic insertion
- For general purpose switching applications

MECHANICAL DATA

- Case: SOT-23 Plastic
- Case material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl)
- Moisture sensitivity: Level 1 per J-STD-020D
- Lead free in RoHS 2002/95/EC compliant

SOT-23



SOT-23		
Dim.	Min.	Max.
A	0.90	1.15
A1	0.00	0.10
b	0.30	0.50
c	0.08	0.15
D	2.80	3.00
E	2.25	2.55
E1	1.20	1.40
e	0.95 Typ.	
e1	1.80	2.00
L	0.55 Ref.	
L1	0.30	0.50
Dimensions in millimeter		

Maximum Ratings & Thermal Characteristics @ T_A = 25℃ unless otherwise specified

Characteristic		Symbol	MC2838	Units
Non-Repetitive Peak Reverse Voltage		V_{RM}	75	V
DC Blocking Voltage		V_R	50	V
Average Rectified Output Current		I_O	100	mA
Non-Repetitive Peak Forward Surge Current	@t=1.0us	I_{FSM}	4	A
Power Dissipation		P_D	150	mW
Operating Temperature Range		T_J	150	℃
Storage Temperature Range		T_{STG}	-55~+150	℃

Electrical Characteristics @ T_A = 25℃ unless otherwise specified

Characteristic	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Maximum Forward Voltage	I_F = 10mA I_F = 50mA I_F = 100mA	V_F	-- -- --	0.67 0.75 0.85	0.9 1.0 1.2	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	V_R = 50V	I_R	--	--	0.1	uA
Typical Diode Capacitance	V_R =0V,f=1MHz	C_D	--	1.1	3	pF
Reverse Recovery time	Irr=1mA, V_R=6V, I_R=I_F=10mA, R_L=100Ω	trr	--	--	4	ns

RATING AND CHARACTERISTIC CURVES
MC2838

Fig.1 Typical Forward Characteristics

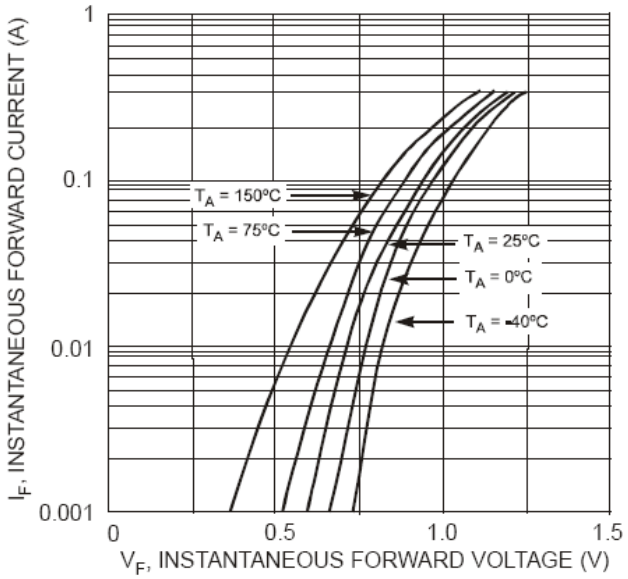


Fig.2 Typical Reverse Characteristics

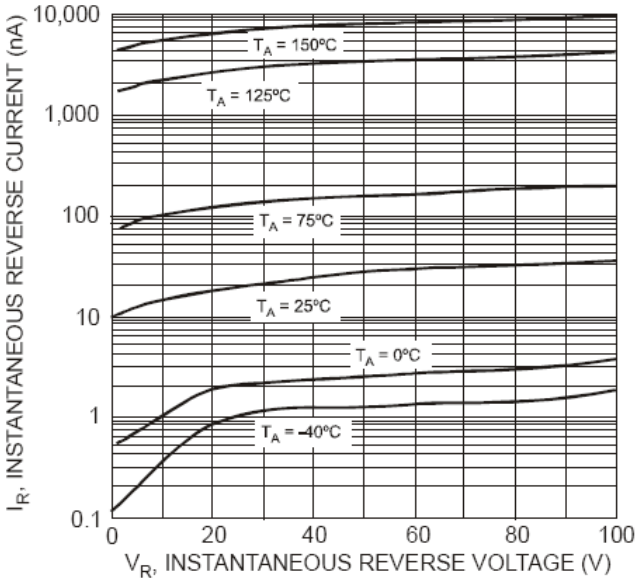
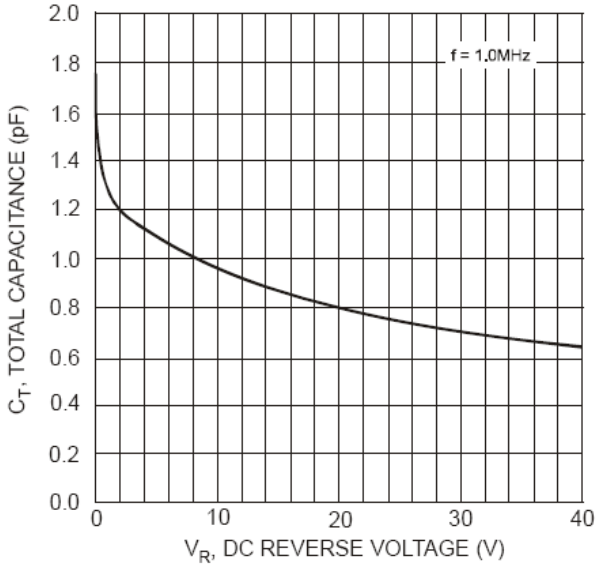
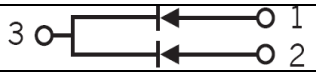


Fig.3 Total Capacitance vs. Reverse Voltage



Device Marking :

Device P/N	Marking code	Equivalent Circuit Diagram
MC2838	A61	

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