

**SURFACE MOUNT
FAST SWITCHING DIODE**

**REVERSE VOLTAGE – 240 Volts
FORWARD CURRENT – 0.2 Ampere**

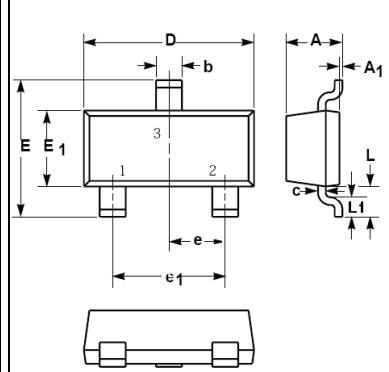
FEATURES

- 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°C unless otherwise specified

Characteristic	Symbol	CMSD2004S	Units
Non-Repetitive Peak Reverse Voltage	V _{RRM}	300	V
DC Blocking Voltage	V _R	240	V
Average Rectified Output Current	I _O	200	mA
Forward Current	I _F	200	mA
Non-Repetitive Forward Surge Current	I _{FRM}	625	mA
Peak Forward Surge Current	I _{FSM}	4	A
		@t=1us	
	@t=1s	1	
Power Dissipation	P _D	250	mW
Thermal Resistance, Junction to Ambient	R _{θJA}	556	°C/W
Operating Temperature Range	T _J	150	°C
Storage Temperature Range	T _{STG}	-65~+150	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	I _R = 100uA	V _{BR}	240	--	--	V
Maximum Forward Voltage	I _F = 100mA	V _F	--	--	1	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	V _R = 240V	I _R	--	--	0.1	uA
Typical Diode Capacitance	V _R = 0V, f=1MHz	C _D	--	--	5	pF
Reverse Recovery time	I _{rr} =3mA, I _F =I _R =30mA, R _L =100Ω	t _{rr}	--	--	50	nS

**RATING AND CHARACTERISTIC CURVES
CMSD2004S**



Fig.1 Typical Forward Characteristics

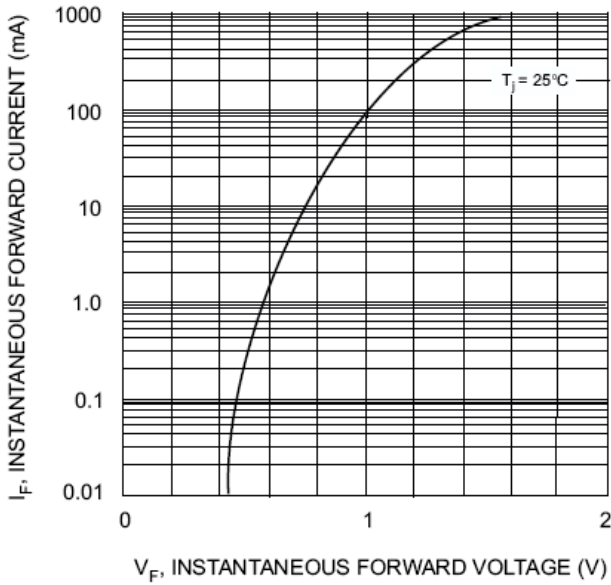


Fig.2 Typical Reverse Characteristics

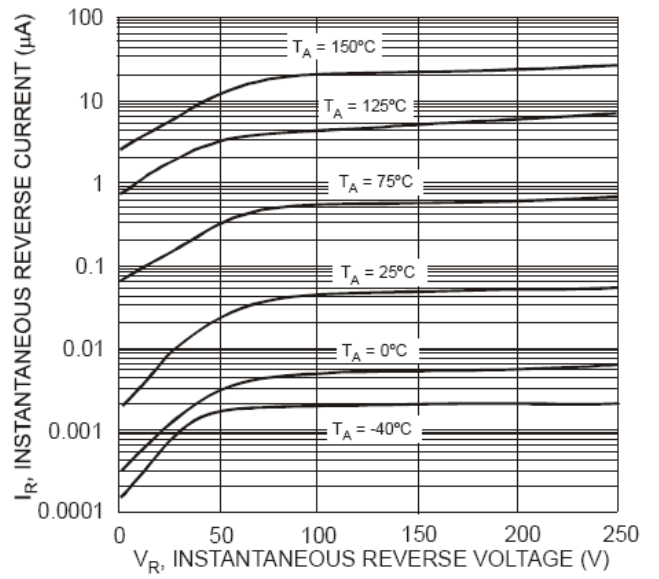


Fig.3 Total Capacitance vs. Reverse Voltage

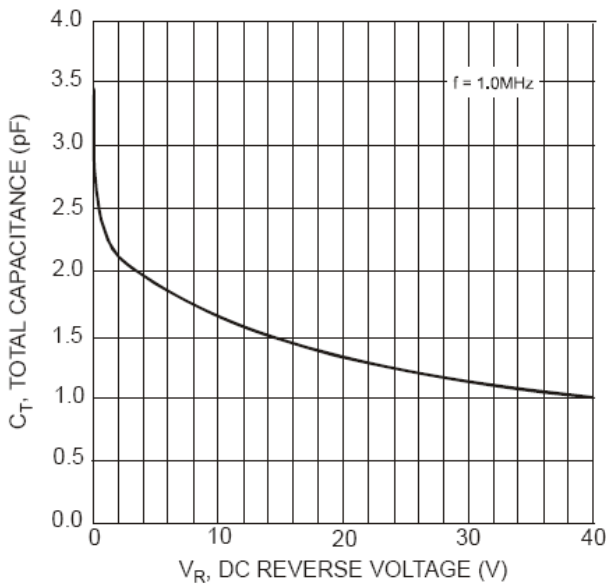
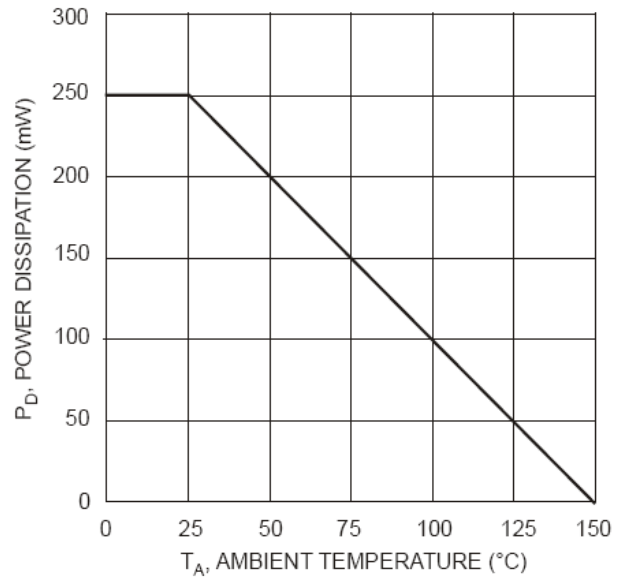


Fig.4 Power Derating Curve



Device Marking :

Device P/N	Marking	Equivalent Circuit Diagram
CMSD2004S	B6D	

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