

CMSD3004S

**SURFACE MOUNT SILICON
DUAL, IN SERIES
HIGH VOLTAGE
SWITCHING DIODE**



SOT-323 CASE

Central
Semiconductor

www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMSD3004S consists of two in-series high voltage silicon switching diodes, manufactured in an SOT-323 surface mount package, designed for high voltage switching applications.

MARKING CODE: 304

APPLICATIONS:

- Voltage multipliers
- Steering diode arrays
- Flyback diodes

FEATURES:

- High voltage capability
- Low reverse leakage current
- Fast switching speed
- Low total conduction losses

MAXIMUM RATINGS: ($T_A=25^{\circ}\text{C}$)

Continuous Reverse Voltage
Peak Repetitive Reverse Voltage
Average Forward Current
Continuous Forward Current
Peak Repetitive Forward Current
Peak Forward Surge Current, $t_p=1.0\mu\text{s}$
Peak Forward Surge Current, $t_p=1.0\text{s}$
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL

SYMBOL		UNITS
V_R	350	V
V_{RRM}	375	V
I_O	200	mA
I_F	225	mA
I_{FRM}	625	mA
I_{FSM}	4.0	A
I_{FSM}	1.0	A
P_D	350	mW
T_J, T_{stg}	-65 to +150	$^{\circ}\text{C}$
θ_{JA}	357	$^{\circ}\text{C/W}$

ELECTRICAL CHARACTERISTICS PER DIODE: ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

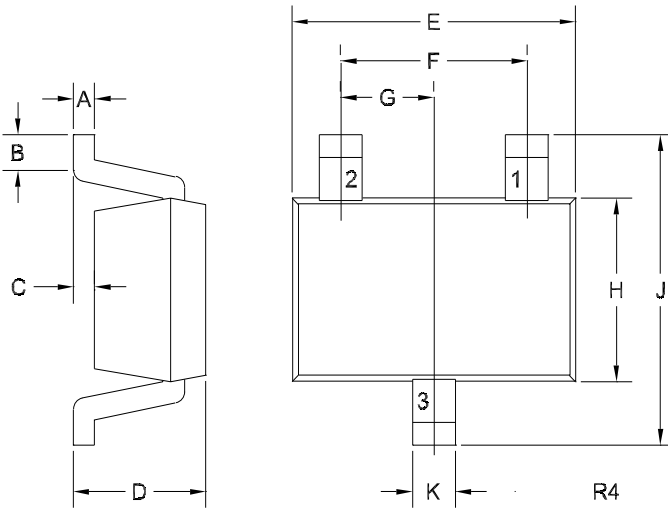
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
I_R	$V_R=350\text{V}$		0.07	1.0	μA
BV_R	$I_R=100\mu\text{A}$	375	460		V
V_F	$I_F=100\text{mA}$		0.95	1.0	V
C_J	$V_R=0, f=1.0\text{MHz}$		0.50	5.0	pF
t_{rr}	$I_F=I_R=30\text{mA}, I_{rr}=3.0\text{mA}, R_L=100\Omega$		11	50	ns

CMSD3004S

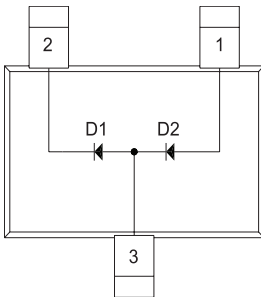
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SOT-323 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



LEAD CODE:

- 1) Anode D2
- 2) Cathode D1
- 3) Anode D1, Cathode D2

MARKING CODE: 304

DIMENSIONS

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.002	0.008	0.05	0.20
B	0.004	-	0.10	-
C	-	0.004	-	0.10
D	0.031	0.043	0.80	1.10
E	0.071	0.087	1.80	2.20
F	0.051		1.30	
G	0.026		0.65	
H	0.045	0.053	1.15	1.35
J	0.079	0.094	2.00	2.40
K	0.008	0.016	0.20	0.40

SOT-323 (REV: R4)

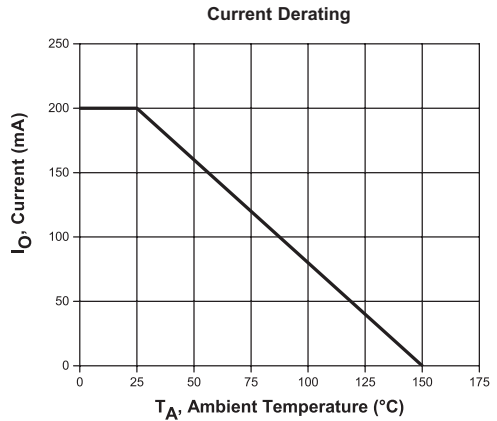
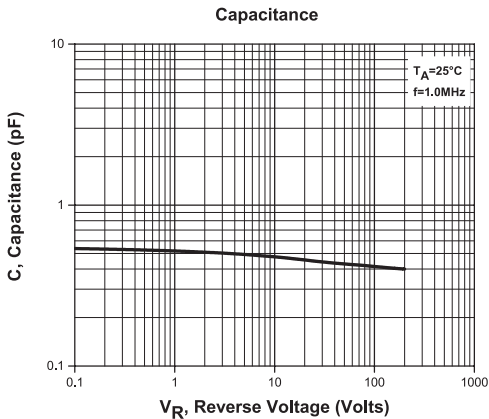
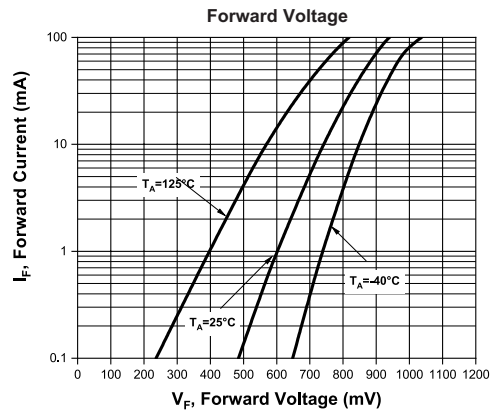
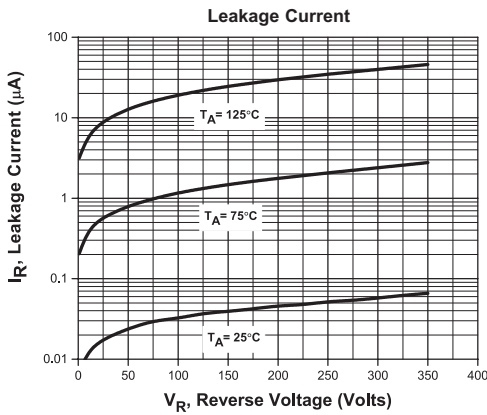
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PRELIMINARY

TYPICAL ELECTRICAL CHARACTERISTICS



R1 (11-December 2023)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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