

CMATVS3V3  
CMATVS5V0



**SURFACE MOUNT SILICON  
UNI-DIRECTIONAL  
TRANSIENT VOLTAGE SUPPRESSORS**



www.centrasemi.com

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMATVS3V3 Series types are Low Leakage, Fast Response TVSs packaged in a space saving SOD-923 surface mount package. These devices are designed to protect sensitive equipment against ESD damage.

**MARKING CODES: CMATVS3V3: E  
CMATVS5V0: F**



**SOD-923 CASE**

**APPLICATIONS:**

- PDAs
- Memory Card Ports
- Mobile Phones
- Instrumentation

**FEATURES:**

- Small, 1.0 x 0.6 x 0.4mm, SOD-923 Surface Mount Package
- Low Leakage Current

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

Peak Power Dissipation (8x20 $\mu\text{s}$ )  
Electrical Fast Transient (IEC 61000-4-4) (5x50ns)  
ESD Voltage (IEC 61000-4-2, Air)  
ESD Voltage (IEC 61000-4-2, Contact)  
Operating and Storage Junction Temperature

**SYMBOL**

$P_{PK}$   
EFT  
 $V_{ESD}$   
 $V_{ESD}$   
 $T_J, T_{stg}$

**UNITS**

W  
A  
kV  
kV  
 $^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$ )  $V_F=0.9\text{V MAX @ } I_F=10\text{mA}$  (for all types)

Type	Maximum Reverse Stand-off Voltage	Minimum Breakdown Voltage		Maximum Reverse Leakage Current	Maximum Clamping Voltage (8x20 $\mu\text{s}$ )		Typical TLP Clamping Voltage (Note 1)		Typical Dynamic Resistance (Note 1)	Typical Junction Capacitance @ 0V Bias
	$V_{RWM}$	$V_{BR}$	@ $I_T$	$I_R$ @ $V_{RWM}$	$V_C$	@ $I_{PP}$	$V_{CL}$	@ $I_{PP}$	$R_{DYN}$	$C_J$
	V	V	mA	$\mu\text{A}$	V	A	V	A	$\Omega$	pF
CMATVS3V3	3.3	5.0	1.0	2.5	11	7.0	6.0	11.3	0.5	45
							3.0	5.3		
CMATVS5V0	5.0	6.2	1.0	1.0	12.3	7.0	6.0	11.3	0.5	40
							3.0	5.3		

Note 1: Transmission Line Pulse (TLP) conditions:  $Z_0=50\Omega$ ,  $t_p=100\text{ns}$

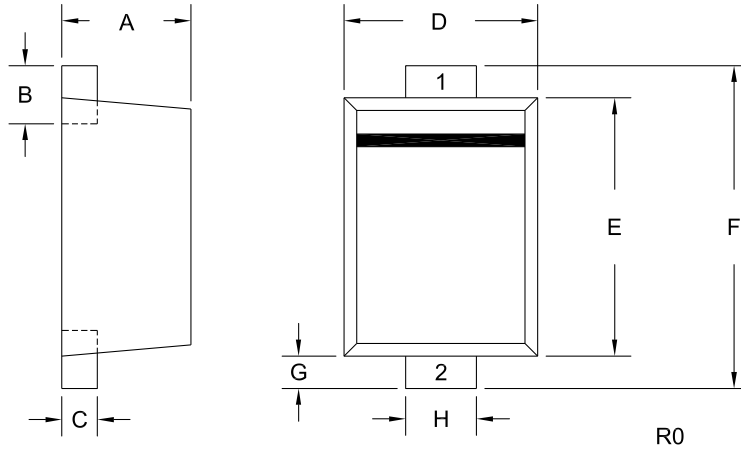
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**SOD-923 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

- 1) Cathode
- 2) Anode

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DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.015	0.016	0.39	0.41
B	0.004	0.010	0.10	0.26
C	0.003	0.006	0.08	0.14
D	0.022	0.026	0.55	0.65
E	0.030	0.033	0.75	0.85
F	0.035	0.043	0.90	1.10
G	0.002	0.006	0.05	0.15
H	0.007	0.011	0.17	0.27

SOD-923 (REV: R0)

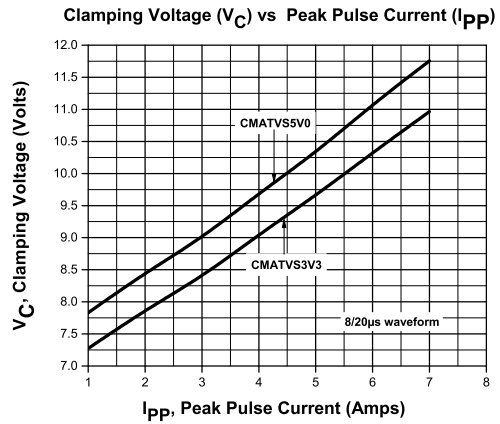
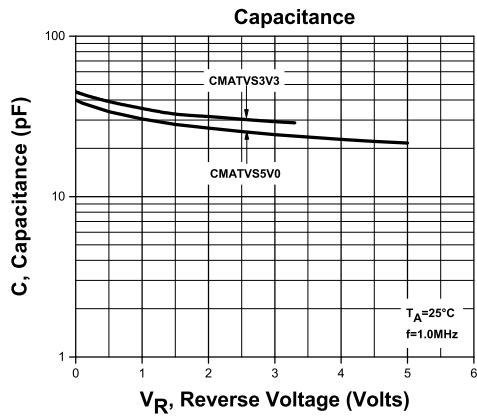
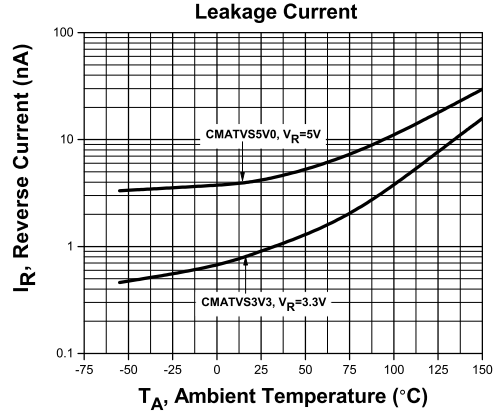
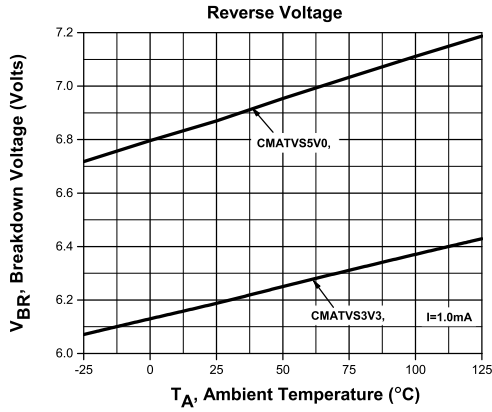
R6 (20-October 2015)

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**TYPICAL ELECTRICAL CHARACTERISTICS**

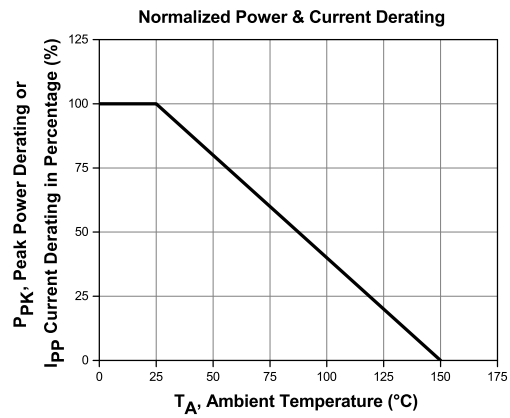
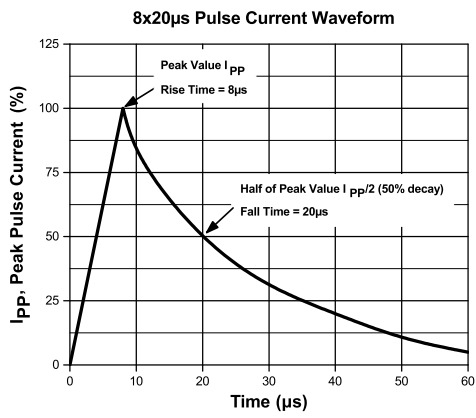
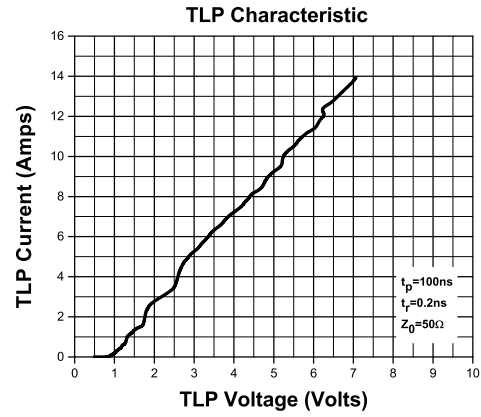
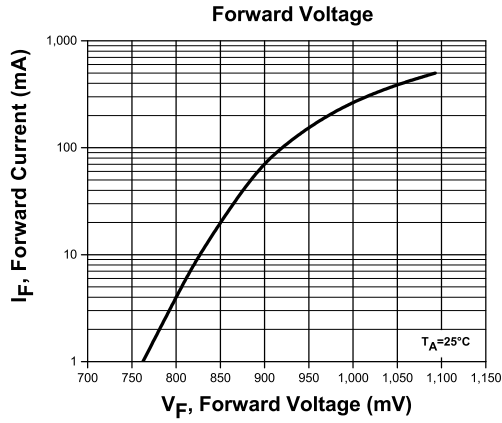


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**TYPICAL ELECTRICAL CHARACTERISTICS**



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## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### 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

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### DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2<sup>nd</sup> 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

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### 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).

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### CONTACT US

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