



**THE DATASHEET OF
CMATVS5V0 TR PBFREE**



CMATVS3V3
CMATVS5V0



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



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMATVS3V3 Series devices 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 μs)
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 μs)		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}		
	V	V	mA	μA	V	A	V	A	Ω	pF
CMATVS3V3	3.3	5.0	1.0	2.5	11.7	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: $Z_0=50\Omega$, $t_p=100\text{ns}$

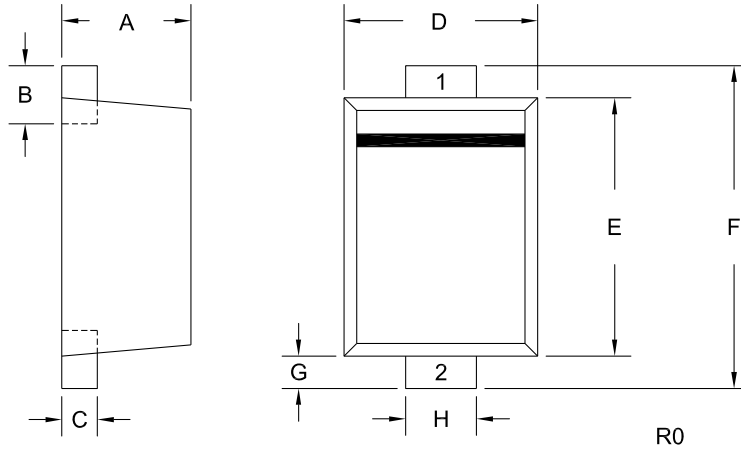
CMATVS3V3
CMATVS5V0



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



SOD-923 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Cathode
- 2) Anode


MARKING CODES:

CMATVS3V3: E
CMATVS5V0: F

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)

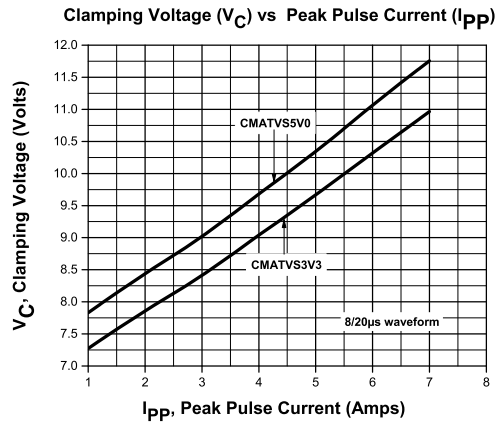
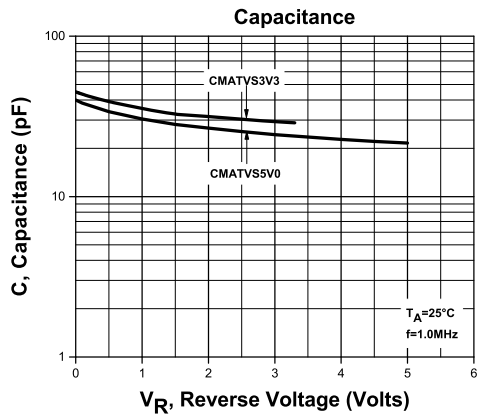
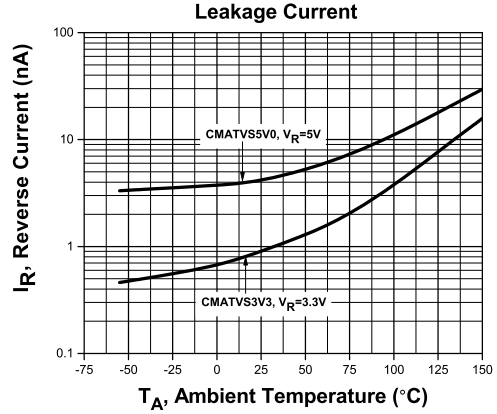
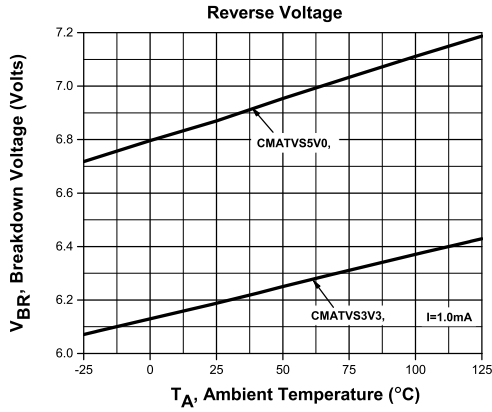
R7 (25-February 2021)


CMATVS3V3
CMATVS5V0


SURFACE MOUNT SILICON
UNI-DIRECTIONAL
TRANSIENT VOLTAGE SUPPRESSORS



TYPICAL ELECTRICAL CHARACTERISTICS



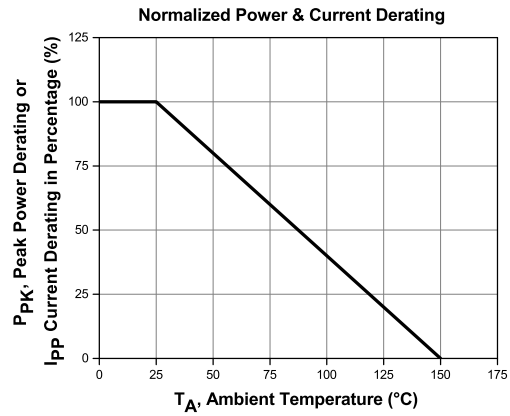
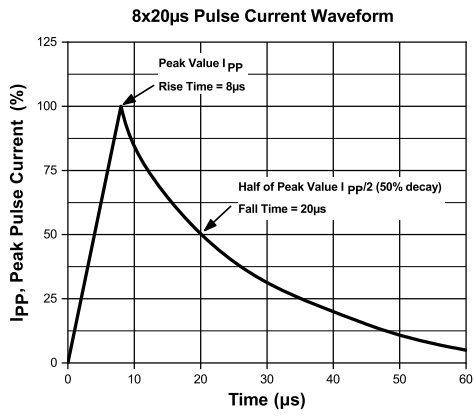
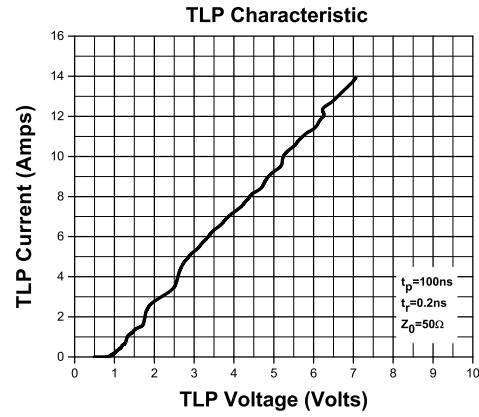
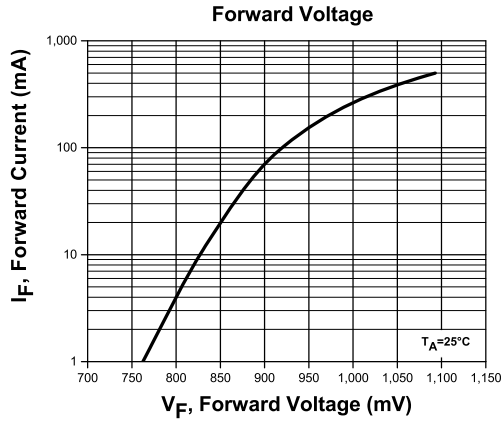
R7 (25-February 2021)


CMATVS3V3
CMATVS5V0

SURFACE MOUNT SILICON
UNI-DIRECTIONAL
TRANSIENT VOLTAGE SUPPRESSORS



TYPICAL ELECTRICAL CHARACTERISTICS



R7 (25-February 2021)

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

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centrasemi.com

Worldwide Field Representatives:
www.centrasemi.com/wwreps

Worldwide Distributors:
www.centrasemi.com/wwdistributors

For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: www.centrasemi.com/terms

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- [⊖ View **CMATVS5V0 TR PBFREE** on WIN SOURCE](#)
- [⊖ **Central Semiconductor Corp** Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

- ✓ Global Sourcing Solution
- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management