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# CEST23NC12VU

#### CREATEK Microelectronics

### **ESD TVS Array in SOT-23**

#### **Features**

- 300 Watts peak pulse power (t<sub>P</sub> = 8/20µs)
- SOT-23 package
- Protects one bidirectional or two unidirectional lines
- Fast response time,typically < 1 ns
- Excellent clamping voltage
- Low leakage current
- IEC 61000-4-2 ±30kV (Air) ESD protection
- IEC 61000-4-2 ±30kV (Contact) ESD protection
- IEC 61000-4-4 40A (5/50ns) EFT protection
- RoHS compliant

#### **Mechanical Data**

- Case:SOT-23 (plastic package). Lead free; RoHS compliant
- Molding Compound Flammability Rating: UL 94 V-0
- **Terminals:** High temperature soldering guaranteed: 260 °C/10 sec. at terminals

#### **Absolute Maximum Ratings**

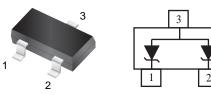
Ratings at 25 °C, ambient temperature unless otherwise specified

Parameter	Symbol	Value	Unit
Peak Pulse Power (T <sub>P</sub> =8/20µS)	P <sub>PP</sub>	300	W
ESD contact/air discharge (IEC-61000-4-2)	V <sub>ESD</sub>	30/30	kV
Peak Pulse Current ( t⊵ = 8/20µS )	I <sub>PP</sub>	10	А
Junction Temperature	TJ	-55 to +125	°C
Storage temperature	T <sub>STG</sub>	-55 to +150	°C

#### **Electrical Characteristics**

 $(T_A = 25 \ ^{\circ}C \text{ unless otherwise specified})$ 

Parameter	Symbols	Conditions	Min	Тур	Max	Units
Reverse stand-off Voltage	V <sub>RWM</sub>				12	V
Reverse Breakdown Voltage	$V_{BR}$	I <sub>T</sub> =1mA	13.3		16.5	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> =12V			1	μA
Clamping Voltage	Vc	I <sub>PP</sub> =1A,T <sub>P</sub> =8/20μS			16	V
Clamping Voltage	Vc	I <sub>PP</sub> =10A,T <sub>P</sub> =8/20μS			30	V
Junction Capacitance	CJ	V <sub>R</sub> =0V,f=1MHz		60		pF



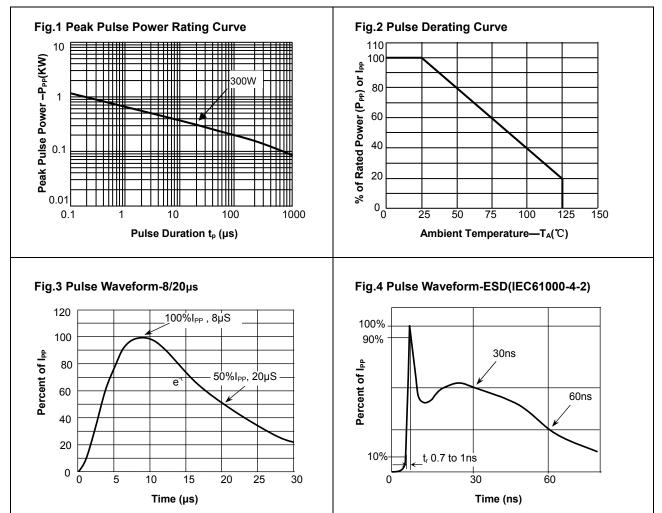
### Applications

- Cellular Handsets and Accessories
- Portable Electronics
- Control & Monitoring Systems
- Servers, Notebooks, and Desktop Pcs
- Set-Top Box
- Communication Systems

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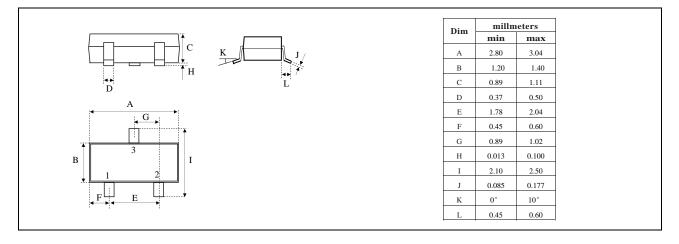
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#### Typical Characteristics ( $T_{amb} = 25 \text{ °C}$ unless otherwise specified)

#### **Package Dimensions**





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#### Part number system

Product series (ESD)	
Package (SOT-23)	
Capacitance type (Normal capacitance)	
Working voltage (12V)	
Directional (Unidirectional)	

#### Marking



#### Ordering inormation

Order code	Package	Packaging option	Base quantity	Packaging specification
CEST23NC12VU	SOT-23	Tape and reel	3000pcs / reel	EIA STD RS-481

#### **Reision history**

Date	Revision	Changes
23-May-2012	1.0	Initial release

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