

Description

The CDSOT23-T24CAN-JSM is designed for applications requiring transient over voltage protection capability. They are intended for use in voltage and ESD sensitive equipment such as computers, printers, business machines, communication systems, medical equipment and other applications. These devices are ideal for situations where board space is at a premium.

CDSOT23-T24CAN-JSM has been specifically designed to protect sensitive components which are connected to power, data and transmission lines from overvoltage caused by ESD (electrostatic discharge), CDE (Cable Discharge Events), and EFT (electrical fast transients).



Features

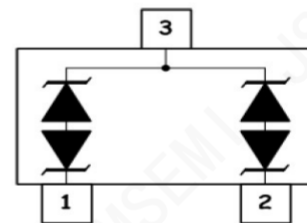
- IEC61000-4-2 (ESD) $\pm 30\text{kV}$ (Contact) $\pm 30\text{kV}$ (Air)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- 400 Watts Peak Pulse Power per ($t_p=8/20\mu\text{s}$)
- Protects two bidirectional lines
- Low clamping voltage
- Working voltages: 24V
- Low leakage current

Machanical Data

- SOT-23 package
- Flammability Rating: UL 94V-0
- Packaging: Tape and Reel
- High temperature soldering guaranteed: $260^\circ\text{C}/10\text{s}$
- Reel size: 7 inch

Ordering Information

Order number	Package	Marking	Operation Temperature Range	MSL Grade	Ship, Quantity	Green
CDSOT23-T24CAN-JSM	SOT-23	C24	-55 to 150°C	3	T&R, 3000	Rohs



Applications

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Networking and Telecom
- Serial and Parallel Ports.
- Peripherals

Absolute Maximum Rating

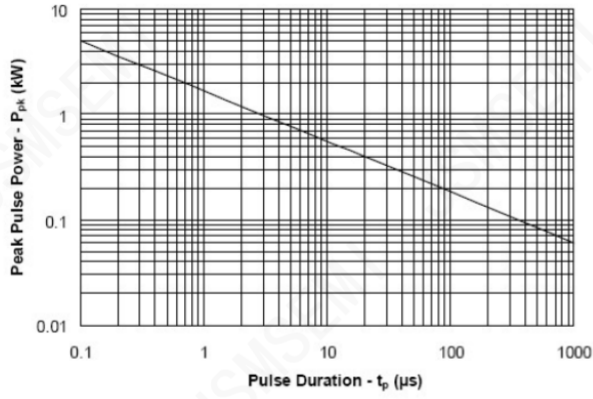
Symbol	Parameter	Value	Units
V _{ESD}	ESD per IEC 61000-4-2 (Contact) ESD per IEC 61000-4-2 (Air)	±30 ±30	kV
P _{PP}	Peak Pulse Power (8/20μs)	400	W
T _{OPT}	Operating Temperature	-55/+150	°C
T _{STG}	Storage Temperature	-55/+150	°C
T _L	Lead Soldering Temperature	260 (10 sec.)	°C

Electrical Characteristics (T_{amb}=25°C)

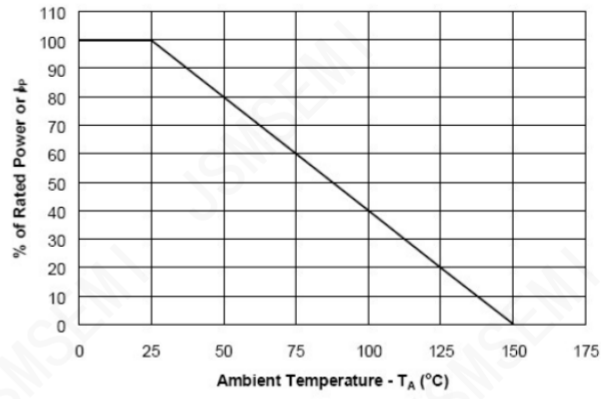
Symbol	Parameter	TestCondition	Min	Typ	Max	Units
V _{RWM}	Reverse Working Voltage				24	V
V _{BR}	Reverse Breakdown Voltage	I _T = 1mA	26.7			V
I _R	Reverse Leakage Current	V _{RWM} = 24V			500	nA
V _C	Clamping Voltage	I _{PP} = 1A, t _p = 8/20μs			32	V
V _C	Clamping Voltage	I _{PP} = 9A, t _p = 8/20μs		40		V
C _J	Junction Capacitance	PIN1/2 to PIN3 V _R = 0V, f = 1MHz		23		pF
C _J	Junction Capacitance	PIN1 to PIN2 V _R = 0V, f = 1MHz		12		pF

Electrical Characteristics Curve

Non-Repetitive Peak Pulse Power vs. Pulse Time

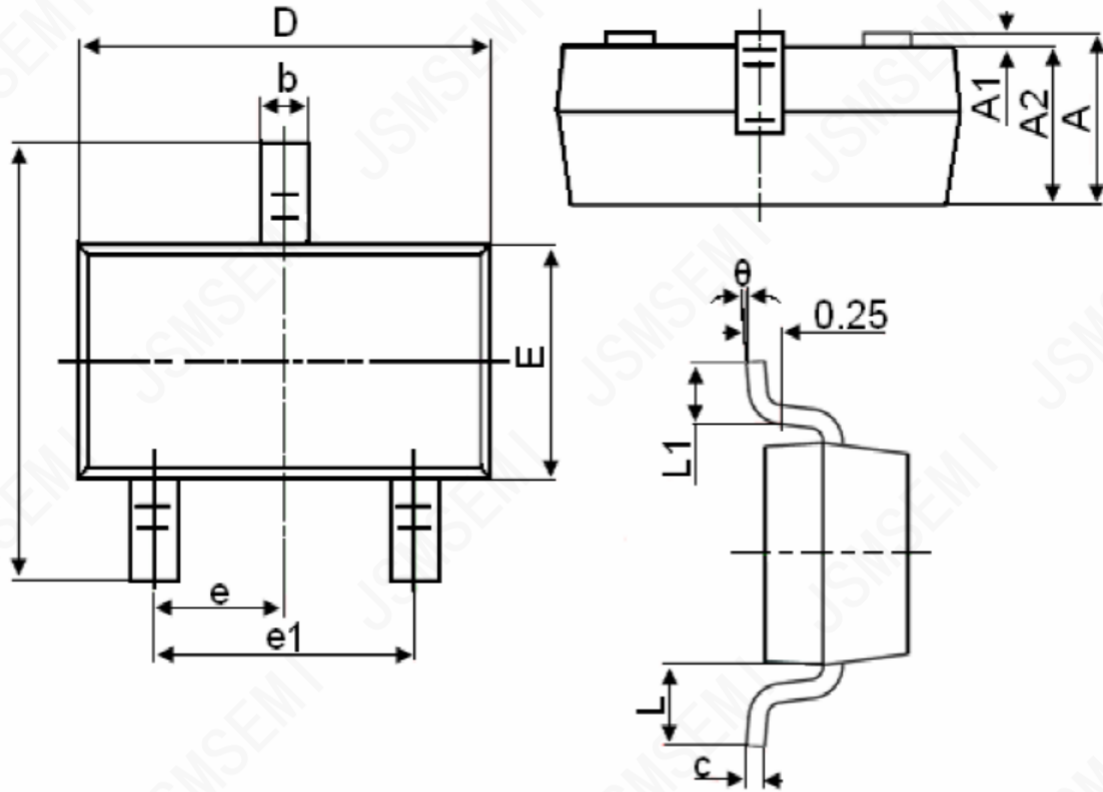


Power Derating Curve



Package Information

SOT-23



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

Revision History

Rev.	Change	Date
V1.0	Initial version	6/27/2021

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