

Features

- 240 Watts peak pulse power ($t_p = 8/20\mu s$)
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 4A (8/20 μs)

Applications

- Dataline
- Automatic Teller Machines
- Net works
- Power line

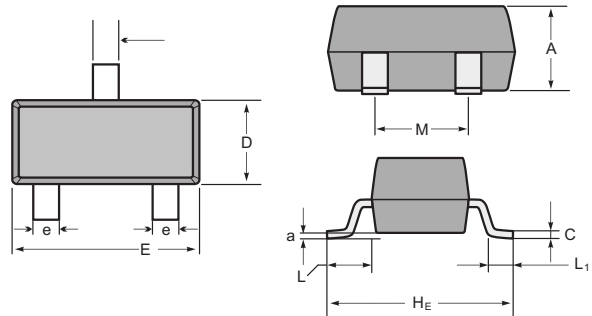
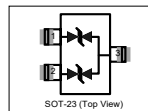
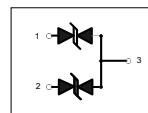
Mechanical Data

- SOT-23 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Ordering information

Order code	Package	Making
SM24CANA-02HTG	SOT-23	M24C

Schematic & PIN Configuration



SOT-23 mechanical data

UNIT		A	C	D	E	H _E	e	M	L	L ₁	a
mm	max	1.1	0.15	1.4	3.0	2.6	0.5	1.95	0.55 (ref)	0.36 (ref)	0.0
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7			0.15
mil	max	43	6	55	118	102	20	77	22 (ref)	14 (ref)	0.0
	min	35	3	47	110	87	12	67			6

Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	240	Watts
Peak Pulse Current ($t_p = 8/20\mu s$) (note1)	I_{PP}	4	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Junction Temperature	T_J	-55 to + 150	°C
Storage Temperature	T_{stg}	-55 to + 150	°C

SM24CANA-02HTG

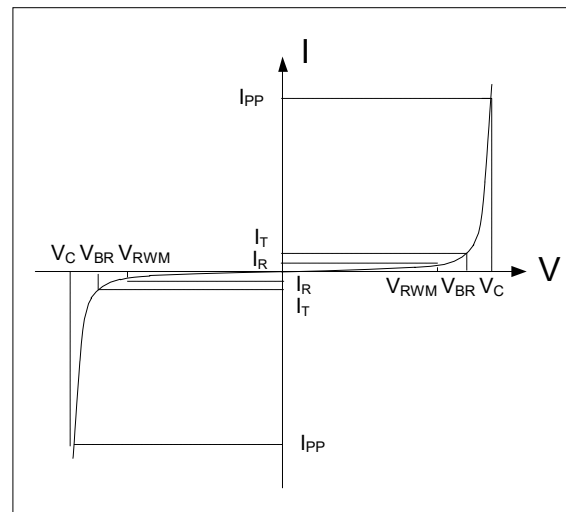
Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				24.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	26.4			V
Reverse Leakage Current	I_R	$V_{RWM} = 24\text{V}, T = 25^\circ\text{C}$		0.1	0.5	μA
Peak Pulse Current	I_{PP}	$t_p = 8/20\mu\text{s}$			4	A
Clamping Voltage	V_C	$I_{PP} = 4\text{A}, t_p = 8/20\mu\text{s}$		44		V
Junction Capacitance	C_j	$V_R = 0\text{V}, f = 1\text{MHz}$		9		pF

Electrical Parameters (TA = 25°C unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current

Note: 8/20 μs pulse waveform.



RATING AND CHARACTERISTIC CURVES (SM24CANA-02HTG)

Figure 1: Peak Pulse Power vs. Pulse Time

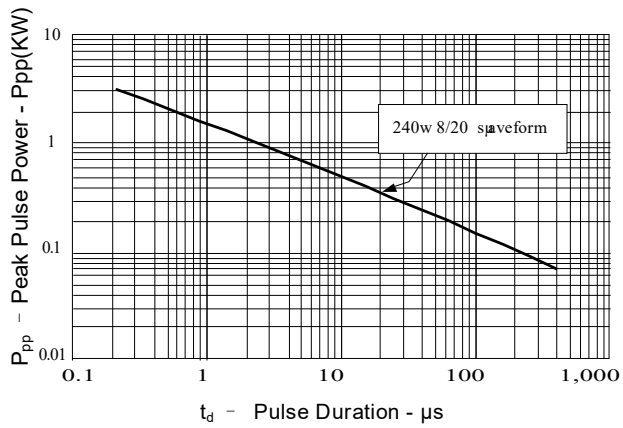


Figure 2: Power Derating Curve

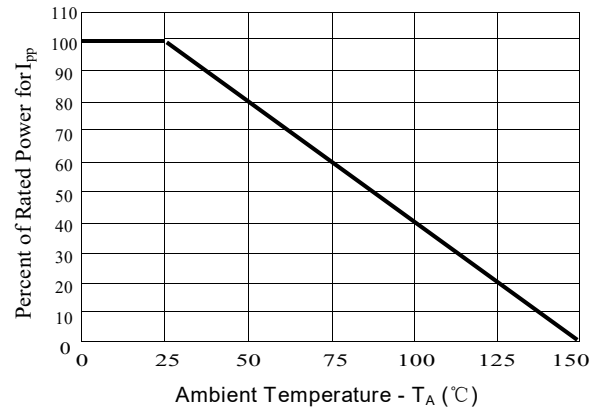


Figure3: Pulse Waveform

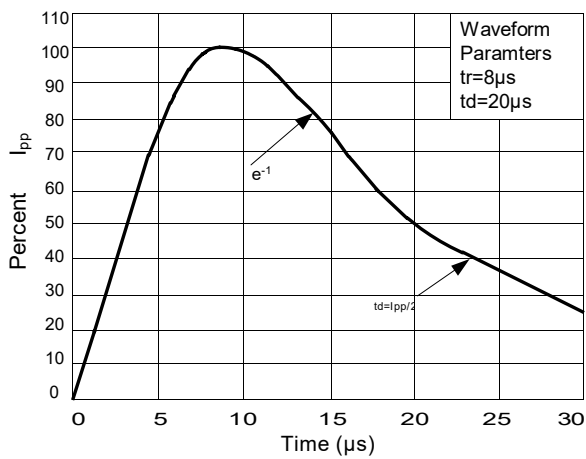


Figure 4: Clamping Voltage vs. I_pp

