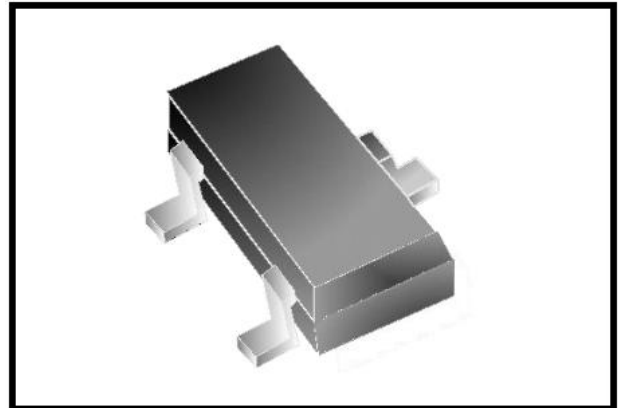


S23Txx(C) – ESD Protection Diode

Feature

- 350 Watts peak pulse power (8/20 μ s)
- Unidirectional & Bidirectional Configuration
- Solid state silicon-avalanche technology
- Working Voltages: 3.3V, 5V, 12V, 15V, 24V and 36V
- Low clamping voltage
- Low leakage current
- Response Time is Typically < 1ns
- AEC-Q101 Qualified
- IEC61000-4-2 (ESD) \pm 30kV (Air), \pm 30kV (Contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)



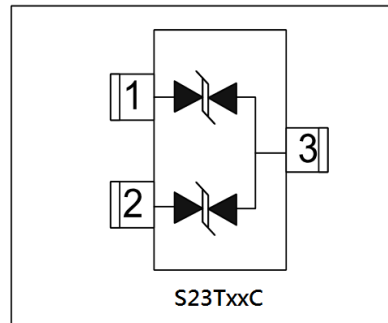
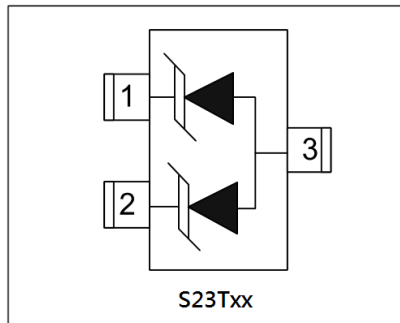
Applications

- RS-232, RS-422 & RS-485
- Cellular Handsets and Accessories
- Control & Monitoring Systems
- Portable Electronics
- Set-up Box
- Servers, Notebooks and Desktop PC
- Wireless Bus Protection

Mechanical Data

- JEDEC SOT-23 package
- Molding compound flammability rating: UL94 V-0
- Tape and Reel Packaging
- RoHS/WEEE Compliant

Schematic and PIN Configuration



Maximum Rating

Parameter	Symbol	Limit	Unit
IEC61000-4-2 ESD Voltage – Air Mode	$V_{ESD}^{(1)}$	± 30	kV
IEC61000-4-2 ESD Voltage – Contact Mode		± 30	
Peak Pulse Power	$P_{PP}^{(2)}$	350	W
Peak Pulse Current	$I_{PP}^{(2)}$	10	A
Maximum Lead Solder Temperature (10 seconds duration)	T_L	260	$^{\circ}$ C
Junction Temperature	T_J	-55~125	$^{\circ}$ C
Storage Temperature Range	T_{stg}	-55~150	$^{\circ}$ C

Note:

1. Device stressed with ten non-repetitive ESD pulses.
2. Non-repetitive current pulse 8/20 μ s exponential decay waveform according to IEC61000-4-5.
3. All ratings are measured at environmental temperature of $T_A = 25^{\circ}$ C unless otherwise noted.

S23Txx(C) – ESD Protection Diode

Electrical Characteristics

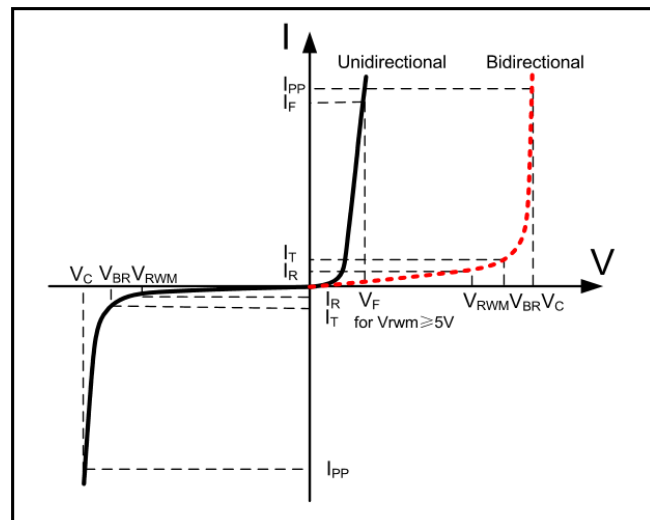
Part Number	Marking	V _{RWM} (V) (Max.)	V _B (V) (Min.)	I _T (mA)	V _C (V) (Max.)	I _{PP} (A) (Max.)	I _R (μA) (Max.)	C _T (pF) (Typ.)
S23T03	3M2	3.3	4.0	1	14	25	1	200
S23T03C	3B2	3.3	4.0	1	15	20	1	100
S23T05	5M2	5.0	6.0	1	16.7	18	1	150
S23T05C	5B2	5.0	6.0	1	16.7	18	1	75
S23T12	AM2	12.0	13.3	1	25	12	1	50
S23T12C	AB2	12.0	13.3	1	25	12	1	30
S23T15	BM2	15.0	16.7	1	35	10	1	45
S23T15C	BB2	15.0	16.7	1	35	10	1	25
S23T24	CM2	24.0	26.7	1	55	5	1	30
S23T24C	CB2	24.0	26.7	1	40	6	1	15
S23T36	DM2	36.0	40.0	1	75	4	1	26
S23T36C	DB2	36.0	40.0	1	85	6	1	15

Note:

1. Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5.
2. All ratings are measured at environmental temperature of T_A = 25°C unless otherwise noted.

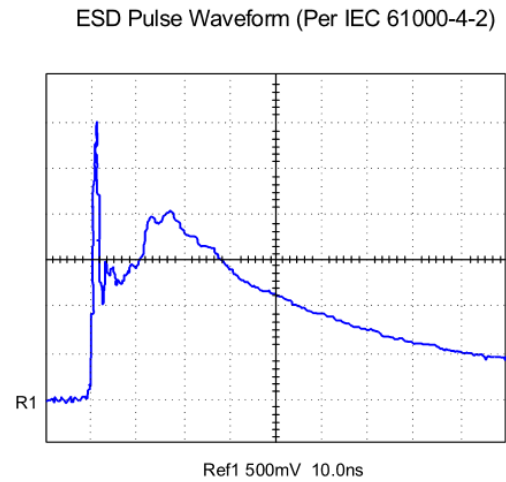
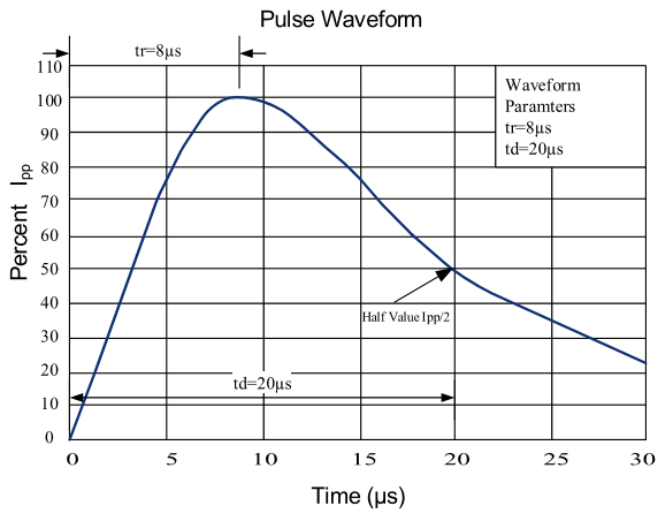
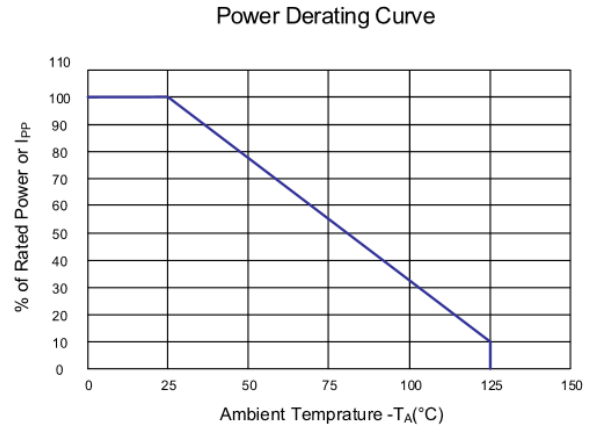
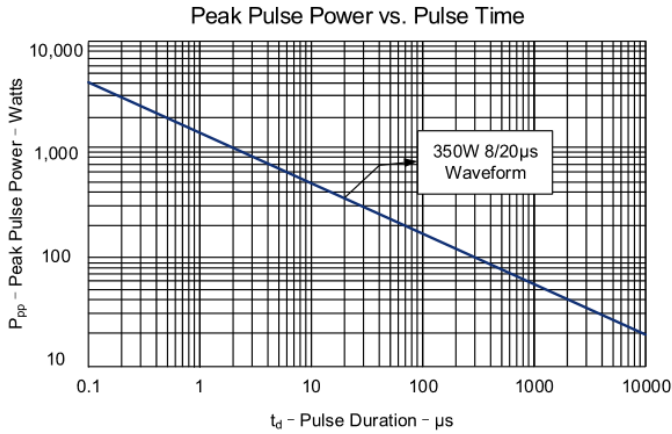
Electrical Parameters

Symbol	Parameter
V _C	Clamping Voltage @ I _{PP}
I _{PP}	Peak Pulse Current
V _{BR}	Breakdown Voltage @ I _T
I _T	Test Current
I _R	Reverse Leakage Current @ V _{RWM}
V _{RWM}	Reverse Stand-off Voltage
V _F	Forward Voltage @ I _F



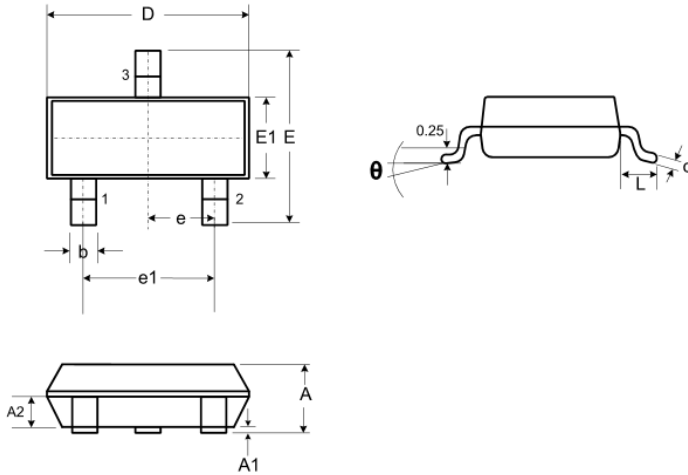
S23Txx(C) – ESD Protection Diode

Typical Characteristics



S23Txx(C) – ESD Protection Diode

SOT-23 Package Outline Dimensions



Symbol	Dimensions (mm)	
	Min	Max
A	0.90	1.15
A1	0.00	0.10
A2	0.60	0.70
b	0.30	0.50
c	0.08	0.15
D	2.80	3.00
E	2.25	2.55
E1	1.20	1.40
e	0.95 BSC	
e1	1.80	2.00
L	0.30	0.50
θ	0°	8°

Marking

Part Number	S23Txx	S23TxxC
Marking Code		
Note:	Code "X" changes for different parts (Refer to table)	

Packaging Information

Order Code	Packaging	Reel Size	PCS/Reel
S23Txx(C) Series	SOT-23	7 inch	3,000