

## DESCRIPTION

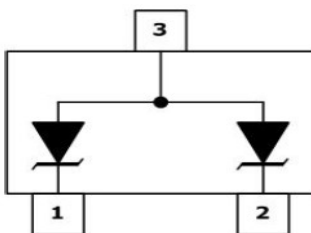
The GSMxx Series is designed for applications requiring transient overvoltage protection capability. They are intended for use in voltage and ESD sensitive equipment such as computers, printers, business machines, communication systems, medical equipment and other applications. These devices are ideal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

This series 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).

## ORDERING INFORMATION

- ✧ Device: GSMxx
- ✧ Package: SOT-23
- ✧ Material: Halogen free
- ✧ Packing: Tape & Reel
- ✧ Quantity per reel: 3,000pcs

## PIN CONFIGURATION



## FEATURES

- ✧ IEC61000-4-2 (ESD)  $\pm 15\text{kV}$  (air),  $\pm 8\text{kV}$  (contact)
- ✧ IEC61000-4-4 (EFT) 40A (5/50ns)
- ✧ 350 Watts Peak Pulse Power per (tp=8/20 $\mu$ s)
- ✧ Protects one bidirectional line or two unidirectional lines
- ✧ Low clamping voltage
- ✧ Working voltages : 3.3V to 36V
- ✧ Low leakage current

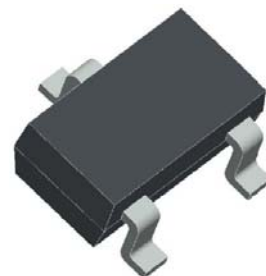
## MACHANICAL DATA

- ✧ SOT-23 package
- ✧ Flammability Rating: UL 94V-0
- ✧ Packaging: Tape and Reel
- ✧ High temperature soldering guaranteed: 260°C/10s
- ✧ Reel size: 7 inch
- ✧ MSL 1

## 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

## PACKAGE OUTLINE



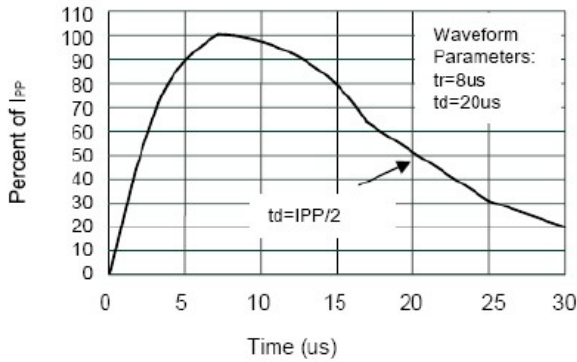
## ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Value	Units
$V_{ESD}$	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$\pm 15$ $\pm 8$	kV
$P_{PP}$	Peak Pulse Power (8/20 $\mu$ s)	350	W
$T_{OPT}$	Operating Temperature	-55/+150	$^{\circ}$ C
$T_{STG}$	Storage Temperature	-55/+150	$^{\circ}$ C
$T_L$	Lead Soldering Temperature	260 (10 sec.)	$^{\circ}$ C

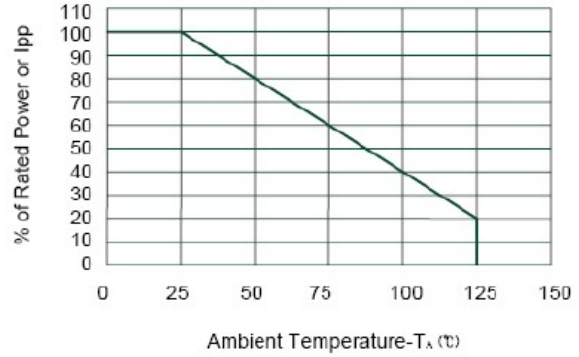
## ELECTRICAL CHARACTERISTICS (Tamb=25 $^{\circ}$ C)

PART NUMBER	DEVICE MARKING	$V_{RWM}$	$V_B$	$I_T$	$V_C@1A$	$V_C$		$I_R$	$C_J$
		(V) (max.)	(V) (min.)	(mA)	(V) (max.)	(V) (max.)	(@A)	( $\mu$ A) (max.)	(pF) (max.)
GSM03	M03	3.3	4	1	7.0	10.5	20	40	450
GSM05	M05	5	6	1	9.8	18	17	10	300
GSM08	M08	8	8.5	1	13.4	24	15	2	240
GSM12	M12	12	13.3	1	19	32	11	1	130
GSM15	M15	15	16.7	1	24	38	10	1	120
GSM18	M18	18	20	1	29	45	9	1	100
GSM20	M20	20	22.3	1	35	50	8	1	90
GSM24	M24	24	26.7	1	43	52	7	1	80
GSM36	M36	36	40	1	60	75	5	1	60

## ELECTRICAL CHARACTERISTICS CURVE

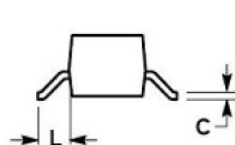
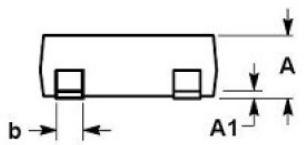
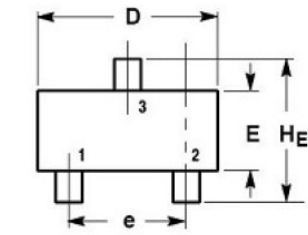


Pulse Waveform



Power Derating Curve

## SOT-23 PACKAGE OUTLINE DIMENSIONS



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.89	1.00	1.11	0.035	0.040	0.044
A1	0.01	0.06	0.10	0.001	0.002	0.004
b	0.37	0.44	0.50	0.015	0.018	0.020
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.90	3.04	0.110	0.114	0.120
E	1.20	1.30	1.40	0.047	0.051	0.055
e	1.78	1.90	2.04	0.070	0.075	0.081
L	0.35	0.54	0.69	0.014	0.021	0.029
HE	2.10	2.40	2.64	0.083	0.094	0.104