



CHENMKO ENTERPRISE CO.,LTD

Halogens free devices

**SURFACE MOUNT
SWITCHING DIODE**

VOLTAGE 400 Volts CURRENT 100 mAmpere

1SS398GP

APPLICATION

* Ultra high speed switching

FEATURE

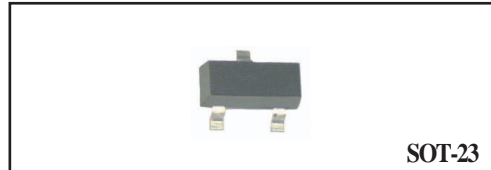
- * Small surface mounting type. (SOT-23)
- * High speed and fast reverse recovery time: $T_{rr} < 0.5 \mu\text{Sec}$
- * Suitable for high packing density.
- * Low forward voltage: $V_F = 1.00\text{V (Typ.)}$
- * Low reverse current: $I_R = 1.0 \mu\text{A (Typ.)}$
- * High reverse breakdown voltage: $V_R > 400\text{V}$
- * Power dissipation: 150mW

CONSTRUCTION

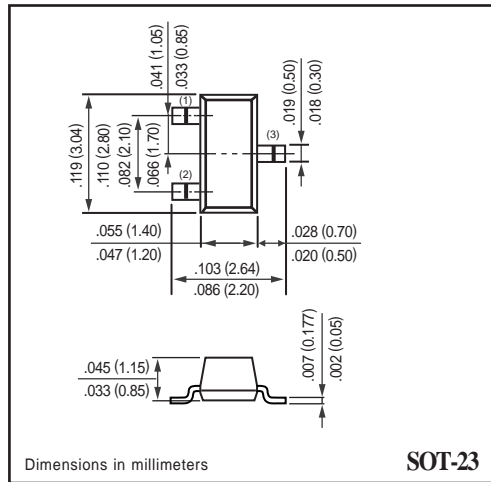
* Silicon epitaxial planar

MARKING

* 8D



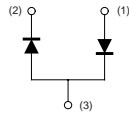
SOT-23



Dimensions in millimeters

SOT-23

CIRCUIT



MAXIMUM RATINGS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

RATINGS	SYMBOL	1SS398GP	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	420	Volts
Maximum RMS Voltage	V_{RMS}	280	Volts
Maximum DC Blocking Voltage	V_{DC}	400	Volts
Maximum Average Forward Rectified Current	I_o	100	mAmps
Peak Forward Surge Current at 10mSec.	I_{FSM}	300	mAmps
Typical Junction Capacitance between Terminal (Note 1)	C_J	2.5	pF
Typical Reverse Recovery Time (Note 2)	T_{RR}	0.5	μSec
Power Dissipation	P_D	150	mW
Maximum Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +125	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

CHARACTERISTICS	SYMBOL	MIN.	TYP.	MAX.	UNITS
Maximum Instantaneous Forward Voltage	@ $I_F = 10\text{mA}$	-	0.80	-	Volts
	@ $I_F = 100\text{mA}$	-	1.00	1.30	Volts
Maximum Average Reverse Current	@ $V_R = 300\text{V}$	-	-	0.1	μAmps
	@ $V_R = 400\text{V}$	-	-	1.0	μAmps

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 0.0 volts.
 2. Apply at $I_F = 10\text{mA}$, $V_R = -6\text{V}$ and Measured at 0.1 I_R .
 3. ESD sensitive product handling required.

RATING CHARACTERISTIC CURVES (1SS398GP)

FIG. 1 - FORWARD CHARACTERISTICS

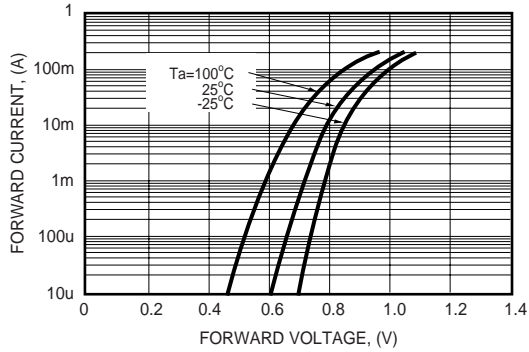


FIG. 2 - REVERSE CHARACTERISTICS

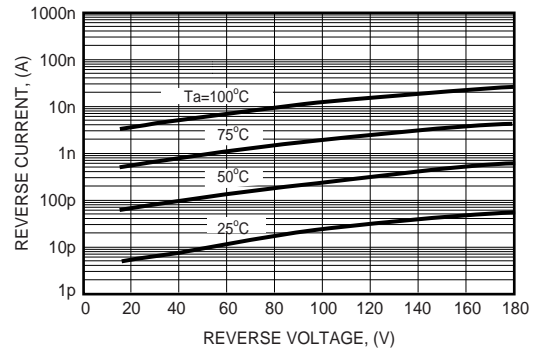


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

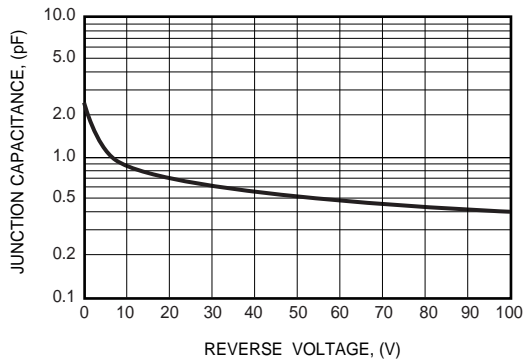


FIG. 4 - POWER DERATING CURVE

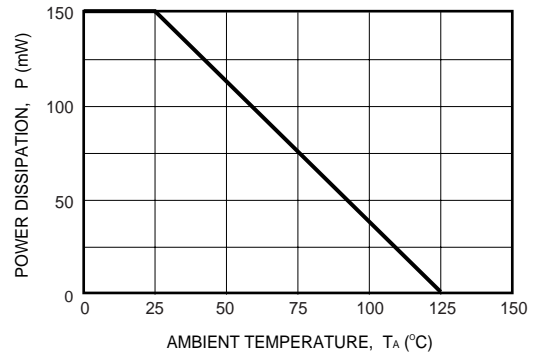


FIG. 5 - REVERSE RECOVERY TIME

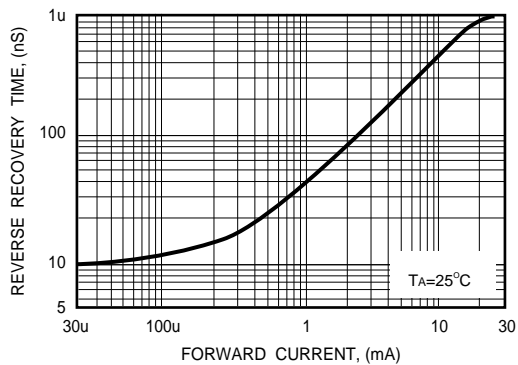


FIG. 6 - REVERSE RECOVERY TIME MEASUREMENT CIRCUIT

