

Linear Systems replaces discontinued Siliconix SST509

Current Regulator Diode — P_{OV} (min) 45 V

Description:

The SST509 belongs to a family of $\pm 20\%$ range current regulators designed for demanding applications in test equipment and instrumentation. These devices utilize JFET techniques to produce a device which is extremely simple to operate.

Features:

- Surface-Mount Package
- Guaranteed $\pm 20\%$ Tolerance
- P_{OV} (min) 45V
- Good Temperature Stability

SST509 Applications:

- Constant-Current Supply
- Current-Limiting
- Timing Circuits

Benefits:

- Simple Series Circuitry, No Separate Voltage Source
- Tight Guaranteed Circuit Performance
- Excellent Performance in Low-Voltage / Battery Circuits and High-Voltage Spike Protection
- High Circuit Stability vs. Temperature

SST509 Electrical Characteristics @ 25°C (Unless otherwise stated)

SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	CONDITIONS
P_{OV}	Peak Operating Voltage ²	45			V	$I_F = 1.1 I_{F(max)}$
V_R	Reverse Voltage		0.8		V	$I_R = 1\text{mA}$
C_F	Forward Capacitance		1.5		pF	$V_F = 25\text{V}, f = 1\text{MHz}$

SST509 Specific Electrical Characteristics @ 25°C (Unless otherwise stated)

PART	Forward Current ³ I_F			Dynamic Impedance ⁴ Z_d		Knee Impedance Z_k	Limiting Voltage ⁵ V_L	
	$V_F = 25\text{V}$			$V_F = 25\text{V}$		$V_F = 6\text{V}$	$I_F = 0.8 I_{F(min)}$	
	MIN	NOM	MAX	MIN	TYP	TYP	TYP	MAX
SST509	2.400	3.00	3.600	0.09	0.3	0.06	3.5	1.7

Absolute Max Ratings @ 25°C unless otherwise stated

Maximum Temperatures

Storage Temperature - 55 to +150°C
 Junction Temperature - 55 to +135°C

Maximum Power Dissipation

Continuous Power Dissipation 350mW

Maximum Currents

Forward Current 20mA
 Reverse Current 50mA

Maximum Voltages

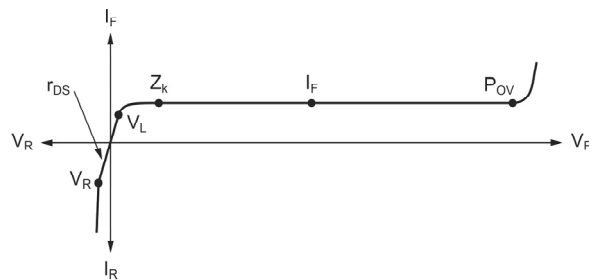
Peak Operating Voltage $P_{OV} = 50\text{V}$

1. Absolute maximum ratings are limiting values above which serviceability may be impaired.
2. Pulsed, $t = 2\text{ms}$. Maximum V_F where $I_F < 1.1 I_{F(max)}$.
3. Pulsed, $t = 2\text{ms}$. Continuous currents may vary.
4. Pulsed, $t = 2\text{ms}$. Continuous impedances may vary.
5. Min V_F required to ensure $I_F = 0.8 I_{F(min)}$.

For SST509 product enquiries & mechanical details please contact your stocking representative Micross Components

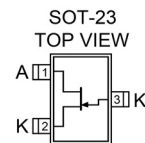
chipcomponents@micross.com

V-I CURRENT CHARACTERISTICS REGULATING DIODE



SST509 Availability:

SOT-23
Bare die



Short Pins 2 & 3 via PCB trace.

