LINEAR SYSTEMS

SST511

micross

Linear Systems replaces discontinued Siliconix SST511

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

Description:

The SST511 belongs to a family of ±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 ±20% Tolerance
- P_{OV} (min) 45V
- Good Temperature Stability

SST511 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

SST511 Electrical Characteristics @ 25ºC (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	$I_R = 1mA$
C_F	Forward Capacitance		1.5		pF	$V_F = 25V$, $f = 1MHz$

SST511 Specific Electrical Characteristics @ 25ºC (Unless otherwise stated)

PART	Forward Current[3] I_F			Dynamic Impedance[4] Z_d		Knee Impedance Z_k	Limiting Voltage[5] V_L	
	$V_F = 25V$			$V_F = 25V$		$V_F = 6V$	$I_F = 0.8 I_{F(min)}$	
	MIN	NOM	MAX	MIN	TYP	TYP	TYP	MAX
SST511	3.800	4.70	5.600	0.07	0.2	0.03	4.2	2.1

Absolute Max Ratings @ 25ºC unless otherwise stated

Maximum Temperatures
Storage Temperature . . . . – 55 to +150ºC
Junction Temperature. . . . . – 55 to +135ºC

Maximum Power Dissipation
Continuous Power Dissipation 350mW

Maximum Currents
Forward Current 20mA
Reverse Current 50mA

Maximum Voltages
Peak Operating Voltage . . . . Pov = 50V

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

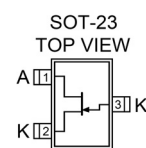**For SST511 product enquiries & mechanical details please contact your stocking representative Micross Components**

chipcomponents@micross.com

V–I CURRENT CHARACTERISTICS REGULATING DIODE
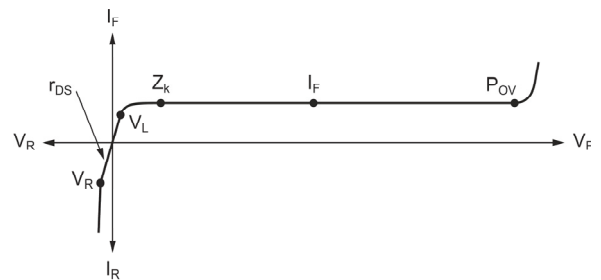
SST511 Availability:

SOT-23
Bare die form

SOT-23
TOP VIEW

Short Pins 2 & 3
via PCB trace.