SST503

Linear Systems replaces discontinued Siliconix SST503

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

Description:

The SST503 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

SST503 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

SST503 Electrical Characteristics @ 25ºC (Unless otherwise stated)

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

SST503 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	$I_F = 0.8I_{F(min)}$	
	MIN	NOM	MAX	MIN	TYP	TYP	TYP	MAX
SST503	0.448	0.56	0.672	0.7	2.0	0.5	1.7	0.7

Absolute Max Ratings @ 25ºC unless otherwise stated

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

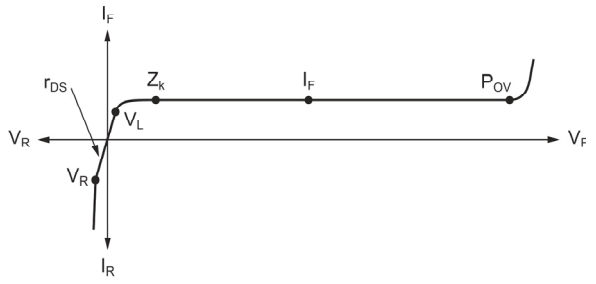
Maximum Power Dissipation
Continuous Power Dissipation 350mW

Maximum Currents
Forward Current 20mA
Reverse Current 50mA

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

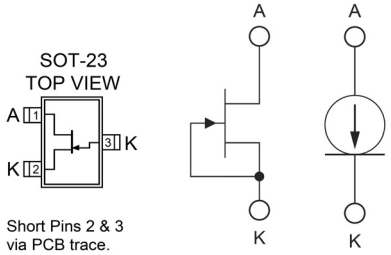
1. Absolute maximum ratings are limiting values above which serviceability may be impaired.
2. Pulsed, t = 2ms. Maximum V_F where $I_F < 1.1I_{F(max)}$.
3. Pulsed, t = 2ms. Continuous currents may vary.
4. Pulsed, t = 2ms. Continuous impedances may vary.
5. Min V_F required to ensure $I_F = 0.8I_{F(min)}$.

V–I CURRENT CHARACTERISTICS REGULATING DIODE



SST503 Availability:

SOT-23
Bare die



For SST503 product enquiries & mechanical details please contact your stocking representative Micross Components

chipcomponents@micross.com