

LSJ510 **Current Regulator Diode**



Linear Systems replaces discontinued Siliconix J510

The Linear Systems LSJ510 is a ± 20% range current regulator

The LSJ510 is a ±20% range current regulator designed for	FEATURES				
 demanding applications in test equipment and instrumentation. The LSJ510 utilizes JFET techniques to produce a single two-leaded device which is extremely simple to operate. Two-Lead Plastic Package Guaranteed ±20% Tolerance Operation up to 50V Excellent Temperature Stability 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 	REPLACEMENT SOURCE FOR SILICONIX J510				
	CURRENT RANGE	3.6mA ± 20%			
	BIASING NOT REQUIRED	$V_{GS} = 0V$			
	ABSOLUTE MAXIMUM RATINGS ¹				
	@ 25 °C (unless otherwise stated)				
	Maximum Temperatures				
	Storage Temperature	-55 to 150°C			
	Junction Operating Temperature	-55 to 135°C			
	Maximum Power Dissipation				
	Continuous Power Dissipation @125°C	350mW			
LSJ510 Applications:	Maximum Currents				
Lous to Applications.	Forward Current	20mA			
Constant-Current Supply	Reverse Current	50mA			
Current-Limiting Timing Circuits	Maximum Voltages				
	Peak Operating Voltage	P _{OV} = 45V			

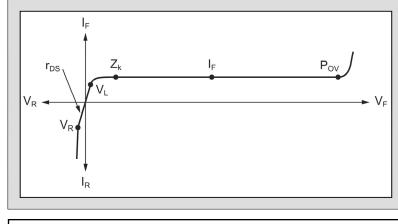
ELECTRICAL CHARACTERISTICS @ 25 °C (unless otherwise stated)

SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	CONDITIONS
Pov	Peak Operating Voltage ²	50			V	$I_F = 1.1I_{F(max)}$
V _R	Reverse Voltage		0.8		V	I _R = 1mA
C _F	Forward Capacitance		2.2		pF	V _F = 25V, <i>f</i> = 1MHz

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∟		
		V _F = 25V		V _F = 25V		V _F = 6V	$I_F = 0.8I_{F(min)}$	
	MIN	NOM	MAX	MIN	TYP	ТҮР	ТҮР	MAX
LSJ510	2.900	3.60	4.300	0.15	0.4	0.07	3.9	1.9

V-I CHARACTERISTICS CURRENT REGULATING DIODE



Notes:

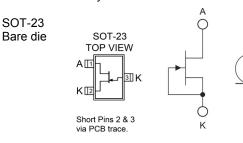
- 1. Absolute maximum ratings are limiting values above which serviceability may be impaired. 2. Pulsed, t = 2ms. Maximum V_F where IF < $1.1_{\rm IF}$ (max).
- 3. Pulsed, t = 2ms. Continuous currents may vary.

4. Pulsed, t = 2ms. Continuous impedances may vary. 5. Min V_F required to ensure $I_F = 0.8_{IF}(min)$.

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LSJ510 Availability:



Please contact Micross for full package and die dimensions



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