

# LSJ500



## Linear Systems replaces discontinued Siliconix J500

The Linear Systems LSJ500 is a ± 20% range current regulator

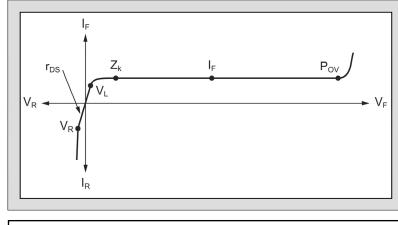
The LSJ500 is a ±20% range current regulator designed for	FEATURES			
demanding applications in test equipment and instrumentation.	REPLACEMENT SOURCE FOR SILICONIX J500			
The LSJ500 utilizes JFET techniques to produce a single two- leaded device which is extremely simple to operate.	WIDE CURRENT RANGE	0.24mA ± 20%		
······································	BIASING NOT REQUIRED	V <sub>GS</sub> = 0V		
Two-Lead Plastic Package	ABSOLUTE MAXIMUM RATINGS <sup>1</sup>			
<ul> <li>Guaranteed ±20% Tolerance</li> <li>Operation up to 45V</li> </ul>	@ 25 °C (unless otherwise stated)			
Excellent Temperature Stability	Maximum Temperatures			
<ul> <li>Simple Series Circuitry, No Separate Voltage Source</li> <li>Tight Guaranteed Circuit Performance</li> <li>Excellent Performance in Low-Voltage/Battery Circuits and High-Voltage Spike Protection</li> </ul>	Storage Temperature	-55 to 150°C		
	Junction Operating Temperature	-55 to 135°C		
	Maximum Power Dissipation			
High Circuit Stability vs. Temperature	Continuous Power Dissipation @125°C	350mW		
LSJ500 Applications:	Maximum Currents			
LSJ500 Applications:	Forward Current	20mA		
Constant-Current Supply	Reverse Current	50mA		
<ul> <li>Current-Limiting</li> <li>Timing Circuits</li> </ul>	Maximum Voltages			
	Peak Operating Voltage	P <sub>ov</sub> = 45V		

#### SYMBOL **CHARACTERISTIC** MIN TYP UNITS CONDITIONS MAX Peak Operating Voltage<sup>2</sup> $P_{OV}$ 45 V $I_F = 1.1I_{F(max)}$ **Reverse Voltage** 0.8 V $I_R = 1 m A$ $V_R$ $C_{F}$ Forward Capacitance 1.5 рF $V_{\rm F}$ = 25V, *f* = 1MHz

### SPECIFIC ELECTRICAL CHARACTERISTICS @ 25 °C (unless otherwise stated)

PART	Forward Current <sup>3</sup> I <sub>F</sub>		Dynamic Impedance <sup>4</sup> Z <sub>d</sub>		Knee Impedance Z <sub>k</sub>	Limiting Voltage⁵ V∟		
	V <sub>F</sub> = 25V		V <sub>F</sub> = 25V		V <sub>F</sub> = 6V	I <sub>F</sub> = 0.8I <sub>F(min)</sub>		
	MIN	NOM	MAX	MIN	TYP	ТҮР	TYP	MAX
LSJ500	0.192	0.24	0.288	4.00	15	2.50	1.2	0.4

#### V-I CHARACTERISTICS CURRENT REGULATING DIODE

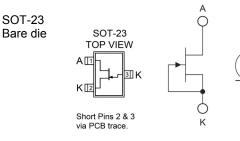


#### Notes

- 1. Absolute maximum ratings are limiting values above which serviceability may be impaired. 2. Pulsed, t = 2ms. Maximum V<sub>F</sub> 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<sub>F</sub> required to ensure  $I_F = 0.8_{IF}(min)$ .

LSJ500 Availability:



Please contact Micross for full package and die dimensions



Tel: +44 1603 788967 Email: chipcomponents@micross.com Web: http://www.micross.com/distribution

Information furnished by Linear Integrated Systems and Micross Components is believed to be accurate and reliable. However, no responsibility is assumed for its use; nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Linear Integrated Systems.

Micross Components Ltd, United Kingdom, Tel: +44 1603 788967, Fax: +44 1603788920, Email: chipcomponents@micross.com Web: www.micross.com/distribution.aspx