

LSJ502 **Current Regulator Diode**



Linear Systems replaces discontinued Siliconix J502

The Linear Systems LSJ502 is a ± 20% range current regulator

The LSJ502 is a ±20% range current regulator designed for	FEATURES				
demanding applications in test equipment and instrumentation. The LSJ502 utilizes JFET techniques to produce a single two- leaded device which is extremely simple to operate.	REPLACEMENT SOURCE FOR SILICONIX J502				
	WIDE CURRENT RANGE	0.43mA ± 20%			
	BIASING NOT REQUIRED	V _{GS} = 0V			
 Two-Lead Plastic Package Guaranteed ±20% Tolerance 	ABSOLUTE MAXIMUM RATINGS ¹				
 Guaranteed £20% Folerance 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 	@ 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	360mW			
LSJ502 Applications:	Maximum Currents				
Constant-Current Supply	Forward Current	20mA			
	Reverse Current	50mA			
Current-Limiting Timing Circuits	Maximum Voltages				
	Peak Operating Voltage	P _{OV} = 50V			

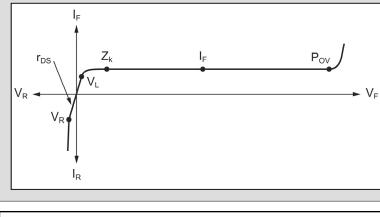
ELECTRICAL CHARACTERISTICS @ 25 °C (unless otherwise stated)

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
CF	Forward Capacitance		2.2		рF	V _F = 25V, <i>f</i> = 1MHz

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

PART	Fo	orward Currer I _F	nt ³	Dynamic Ir Z	npedance ⁴	Knee Impedance Z _k	Limiting Voltage⁵ V∟	
	V _F = 25V			V _F = 25V		V _F = 6V	$I_F = 0.8I_{F(min)}$	
	MIN	NOM	MAX	MIN	TYP	TYP	TYP	MAX
J502	0.344	0.43	0.516	1.50	7	1.10	1.5	0.6

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 $I_F = 0.8_{IF}(min)$.

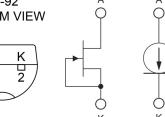
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Available





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