

LSJ508 **Current Regulator Diode**



Linear Systems replaces discontinued Siliconix J508

The Linear Systems LSJ508 is a ± 20% range current regulator

The LSJ508 is a ±20% range current regulator designed for demanding applications in test equipment and instrumentation. The LSJ508 utilizes JFET techniques to produce a single twoleaded 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

LSJ508	Applica	itions:
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- Constant-Current Supply
- Current-Limiting
- **Timing Circuits**

FEATURES					
REPLACEMENT SOURCE FOR SILICONIX J508					
WIDE CURRENT RANGE 2.40mA ± 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				
Maximum Currents					
Forward Current	20mA				
Reverse Current	50mA				
Maximum Voltages					
Peak Operating Voltage	P _{OV} = 45V				
Peak Operating Voltage Pov = 45V					

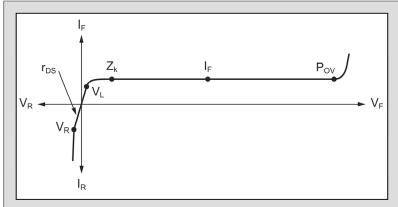
ELECTRICAL CHARACTERISTICS @ 25 °C (unless otherwise stated)

SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	CONDITIONS
Pov	Peak Operating Voltage ²	50			V	$I_{F} = 1.1I_{F(max)}$
V_R	Reverse Voltage		8.0		V	$I_R = 1mA$
C _F	Forward Capacitance		2.2		рF	V _F = 25V, <i>f</i> = 1MHz

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

PART	Forward Current ³		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
LSJ508	1.900	2.40	2.900	0.20	0.7	0.13	3.1	1.5

V-I CHARACTERISTICS CURRENT REGULATING DIODE



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

LSJ508 Availability:

SOT-23 Bare die TOP VIEW Short Pins 2 & 3

Please contact Micross for full package and die dimensions



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