

LSJ504 **Current Regulator Diode**



Linear Systems replaces discontinued Siliconix J504

The Linear Systems LSJ504 is a ± 20% range current regulator

The LSJ504 is a ±20% range current regulator designed for demanding applications in test equipment and instrumentation. The LSJ504 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 45V
- **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

LSJ504	Applications:
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- Constant-Current Supply
- Current-Limiting
- **Timing Circuits**

FEATURES					
REPLACEMENT SOURCE FOR SILICONIX J504					
WIDE CURRENT RANGE	0.75mA ± 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				

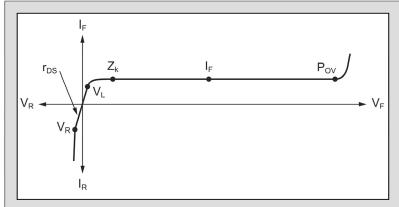
ELECTRICAL CHARACTERISTICS @ 25 °C (unless otherwise stated)

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		٧	$I_R = 1mA$
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 I _F			Dynamic Ir Z	, "	Knee Impedance Z _k	Limiting Voltage⁵ 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
LSJ504	0.600	0.75	0.900	0.80	3.5	0.55	1.9	0.8

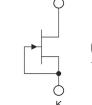
V-I CHARACTERISTICS CURRENT REGULATING DIODE



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

LSJ504 Availability:

SOT-23 Bare die TOP VIEW



Short Pins 2 & 3





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