

J501 Current Regulator Diode



Linear Systems replaces discontinued Siliconix J501

The Linear Systems J501 is a ± 20% range current regulator

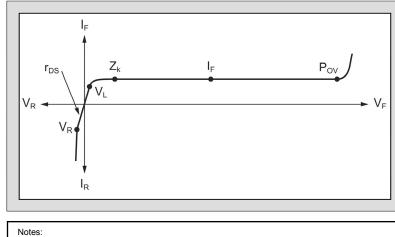
The J501 is a ±20% range current regulator designed for	FEATURES					
demanding applications in test equipment and instrumentation. The J501 utilizes JFET techniques to produce a single two-leaded device which is extremely simple to operate.	REPLACEMENT SOURCE FOR SILICONIX J501					
	WIDE CURRENT RANGE	0.33mA ± 20%				
	BIASING NOT REQUIRED	$V_{GS} = 0V$				
 Two-Lead Plastic Package Guaranteed ±20% Tolerance 	ABSOLUTE MAXIMUM RATINGS ¹					
 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 	@ 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				
J501 Applications:	Maximum Currents					
····	Forward Current	20mA				
 Constant-Current Supply Current-Limiting Timing Circuits 	Reverse Current	50mA				
	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
C _F	Forward Capacitance		2.2		pF	V _F = 25V, <i>f</i> = 1MHz

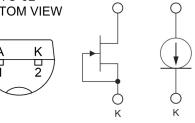
SPECIFIC ELECTRICAL CHARACTERISTICS @ 25 °C (unless otherwise stated)

PART	Forward Current ³ I _F		Dynamic Impedance ⁴ Z _d		Knee Impedance Z _k	Limiting Voltage⁵ V∟		
	V _F = 25V		V _F = 25V		V _F = 6V	$I_F = 0.8I_{F(min)}$		
	MIN	NOM	MAX	MIN	ТҮР	ТҮР	ТҮР	MAX
J501	0.264	0.33	0.396	2.20	10	1.60	1.3	0.5

V-I CHARACTERISTICS CURRENT REGULATING DIODE



TO-92 Available Packages: **BOTTOM VIEW** TO-92 Bare Die. Κ



Please contact Micross for full package and die dimensions

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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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