

J511 Current Regulator Diode



Linear Systems replaces discontinued Siliconix J511

The Linear Systems J511 is a ± 20% range current regulator

The J511 is a ±20% range current regulator designed for			FE	FEATURES					
demanding applications in test equipment and instrumentation.				REPLACEMENT SOURCE FOR SILICONIX J511					
The J511 utilizes JFET techniques to produce a single two-leaded device which is extremely simple to operate.			W	WIDE CURRENT RANGE			4.70mA ± 20%		
				BIASING NOT REQUIRED			$V_{GS} = 0V$		
Two-Lead Plastic Package			AE	ABSOLUTE MAXIMUM RATINGS ¹					
 Guaranteed ±20% Tolerance Operation up to 50V Excellent Temperature Stability 				@ 25 °C (unless otherwise stated)					
				Maximum Temperatures					
 Simple Series Circuitry, No Separate Voltage Source Tight Guaranteed Circuit Performance Excellent Performance in Low-Voltage/Battery Circuits 			Ste	orage Te	-55 to 150°C				
			Ju	nction O	-55 to 135°C				
and High-Voltage Spike ProtectionHigh Circuit Stability vs. Temperature				Maximum Power Dissipation					
				ontinuou	360mW				
J511 Applications: Constant-Current Supply Current-Limiting Timing Circuits] Ma	Maximum Currents					
			Fo	rward C	20mA				
			Re	everse C	50mA				
			Ма	Maximum Voltages					
			Pe	ak Oper	P _{ov} = 50V				
ELECTRICAL CHARACTERISTICS @ 25 °C (unless otherwise stated)									
SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	CONDITIONS			
Pov	Peak Operating Voltage ²	50			V	$I_F = 1.1I_{F(max)}$			
		1		1	1				

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

PART	Forward Current ³ I _F			Dynamic lı Z	npedance ⁴	Knee Impedance Z _k	Limiting Voltage ⁵ V∟	
	V _F = 25V			V _F =	25V	V _F = 6V	$I_F = 0.8I_{F(min)}$	
	MIN	NOM	MAX	MIN	TYP	TYP	TYP	MAX
J511	3.800	4.70	5.600	0.12	0.3	0.05	4.2	2.1

0.8

2.2

V-I CHARACTERISTICS CURRENT REGULATING DIODE

3. Pulsed, t = 2ms. Continuous currents may vary.

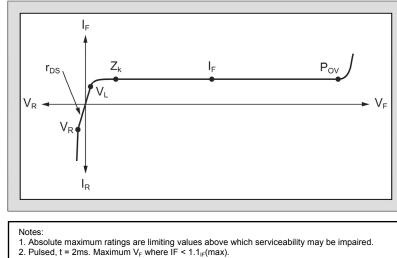
4. Pulsed, t = 2ms. Continuous impedances may vary. 5. Min V_F required to ensure $I_F = 0.8_{IF}(min)$.

Reverse Voltage

Forward Capacitance

 V_{R}

CF



Available Packages: BOTT

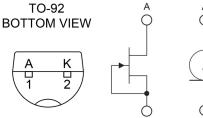
Bare Die.

V

pF

 $I_R = 1 m A$

 $V_{\rm F} = 25V, f = 1$ MHz



Please contact Micross for full package and die dimensions

Micross Components Europe



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

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