

The J552 is a current regulator designed for applications in test equipment and instrumentation. With forward current between 0.2 and 0.7 mA, the J552 will meet a wide array of design requirements. In addition to its two-lead construction, it features current control over wide temperature ranges and simple "floating" operation as no power supplies are required for biasing. Finally, the low-cost TO-92 package ensures a cost effective design solution.

For additional design information please see performance curves NKL, which are located in Section 7.

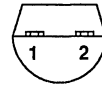
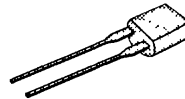
PART	I_F (mA)
J552	0.77

SIMILAR PRODUCTS

- TO-18, See CR022 Series
- Chips, Order J5XXCHP

TO-92

BOTTOM VIEW



- 1 ANODE
2 CATHODE

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETERS/TEST CONDITIONS	SYMBOL	LIMIT	UNITS
Peak Operating Voltage	P_{OV}	100	v
Forward Current	I_F	20	mA
Reverse Current	I_R	50	
Power Dissipation	P_D	350	mW
Power Derating		3.27	mW/°C
Operating Junction Temperature	T_J	-55 to 135	°C
Storage Temperature	T_{stg}	-55 to 135	
Lead Temperature (1/16" from case for 10 seconds)	T_L	300	

ELECTRICAL CHARACTERISTICS ¹				LIMITS		
PARAMETER	SYMBOL	TEST CONDITIONS	TYP ²	J552		UNIT
				MIN	MAX	
STATIC						
Forward Current ³	I_{F1}	$V_F = 100\text{ V}$	400		770	μA
		$V_F = 25\text{ V}$	400	250	700	
		$V_F = 1\text{ V}$	390	200		
Peak Operating Voltage ^{3, 4}	P_{OV}	$I_F = 100\text{ V } I_{F1(MAX)}$	160	100		V
Limiting Voltage ⁵	V_L	$I_F = 0.9 I_{F1(MIN)}$	1		1.5	
DYNAMIC						
Small-Signal Dynamic Impedance ³	Z_{F1}	$V_F = 25\text{ V}, f = 1\text{ kHz}$	8	1		$\text{M}\Omega$
Anode-Cathode Capacitance	C_F	$V_F = 25\text{ V}, f = 1\text{ MHz}$	2			pF

- NOTES: 1. $T_A = 25^\circ\text{C}$ unless otherwise noted.
 2. For design aid only, not subject to production testing.
 3. Pulse test; $PW = 300\ \mu\text{s}$, duty cycle $\leq 3\%$.
 4. Maximum $V_F < 1.1 I_{F1(MAX)}$ is guaranteed.
 5. Maximum V_F required to insure $I_F > 0.9 I_{F1(MIN)}$.