

9347963 UNITRODE CORP

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T-03-09

# SIGNAL DIODE

Ultra Low Leakage.

DE104, DE110, DE111,  
DE112, DE113, DE114, DE115

**FEATURES**

- Metallurgical Bond
- Picoamp Leakage
- High Conductance
- Low Capacitance
- Planar Passivated Chip
- DO-35

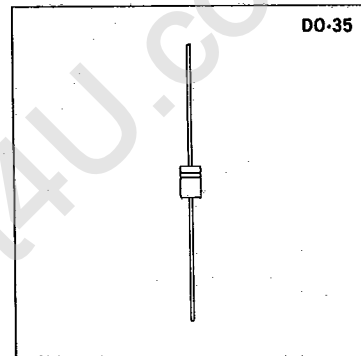
**DESCRIPTION**

This popular series, offers leakage currents which are among the lowest available and are very useful in sensitive instrumentation and sensing circuits as well as computer and general applications. These devices are available with custom Hi-Rel screening.

**ABSOLUTE MAXIMUM RATINGS, at 25°C**

Average Rectified Current	74mA
Forward Steady-State DC Current	50mA
Recurrent Peak Forward Current	225mA
Peak Forward Surge Current, I <sub>FSM</sub>	2A
Power Dissipation	250mW
Linear Power Derating Factor (From 25°C)	1.43mW/°C
Operating Temperature Range	-65°C to +175°C
Storage Temperature Range	-65°C to +200°C

**MECHANICAL SPECIFICATIONS**



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**ELECTRICAL SPECIFICATIONS (at 25°C unless noted)**

Type	Forward Voltage, V <sub>F</sub> , Volts											
	@ .01mA		@ .1mA		@ 1mA		@ 10mA		@ 50mA		@ 100mA*	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
DE104	0.520	0.620	0.610	0.700	0.700	0.790	0.790	0.890	0.875	1.000	0.930	1.100
DE110	0.500	0.600	0.590	0.690	0.680	0.780	0.780	0.880	—	—	0.880	1.200
DE111	0.500	0.600	0.590	0.690	0.680	0.780	0.780	0.880	—	—	0.880	1.200
DE112	—	—	—	—	—	—	—	—	—	1.000	—	—
DE113	—	—	—	—	—	—	—	—	—	1.000	—	—
DE114	0.500	0.600	0.590	0.690	0.680	0.780	0.780	0.880	—	—	0.880	1.200
DE115	0.500	0.600	0.590	0.690	0.680	0.780	0.780	0.880	—	—	0.880	1.200

\*Pulse measurement (pulse width ≤ 300μsec, duty cycle ≤ 2%)

Type	Maximum Reverse Current I <sub>R</sub>						Capacitance V <sub>R</sub> = 0 f = 1mHz	BreakDown Voltage I <sub>R</sub> = 5μA
	V <sub>R</sub> = 20V	V <sub>R</sub> = 20V T <sub>A</sub> = 150°C	V <sub>R</sub> = 30V	V <sub>R</sub> = 30V T <sub>A</sub> = 150°C	V <sub>R</sub> = 50V	V <sub>R</sub> = 50V T <sub>A</sub> = 150°C		
DE104	20pA	100nA					4pF	40V
DE110			2.0nA	4.0μA			4pF	—
DE111	200pA	500nA			5.0nA	10μA	4pF	—
DE112	100pA	250nA					6pF	—
DE113	250pA	500nA	1.0nA	2.0μA			6pF	—
DE114							4pF	—
DE115					2.0nA	4.0μA	4pF	—



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