DIODE ARRAY

CA3019

One diode "quad" and two isolated diodes on a common substrate used for modulator, mixer, balanced modulator, analog switch, and diode gate for chopper-modulator applications. 10-lead "TO-5"

package; Outline No. 1. For schematic diagrams, see Figs. 283 and 284.

MAXIMUM RATINGS

Device Dissipation:		
Any one diode unit	20	mW
Total for device	120	mW
Diode Voltage Limits	−3 to +12	V
Temperature Range:		
Operating	−55 to 125	°C
Storage	−65 to 200	°C

TYPICAL CHARACTERISTICS (At ambient temperature = 25°C)

DC Forward Voltage Drop (I_F = 1mA)	V_F	0.73	V
DC Reverse Breakdown Voltage (I_R = −10μA):			
Any diode	$V_{(BR)R}$	6	V
Any diode and substrate	$V_{(BR)R}$	80	V
DC Reverse Leakage Current (V_R = −4V):			
Any diode	I_R	0.0055	μA
Any diode and substrate	I_R	0.010	μA
Magnitude of Diode Offset (Difference in DC Forward Voltage Drops of any Two Units) (I_F = 1mA)	$\lvert V_{F1} - V_{F2} \rvert$	1	mV
Single Diode Capacitance (V_R = −2V, f = 1MHz)	C_D	1.8	pF
Diode Quad-to-Substrate Capacitance (V_R between terminals 2, 5, 6, or 8 of diode quad and terminal 7 (substrate) = −2V):			
Terminal 2 or 6 to terminal 7	C_{DQ-1}	4.4	pF
Terminal 5 or 8 to terminal 7	C_{DQ-1}	2.7	pF
Series Gate Switching Pedestal Voltage	V_S	10	mV