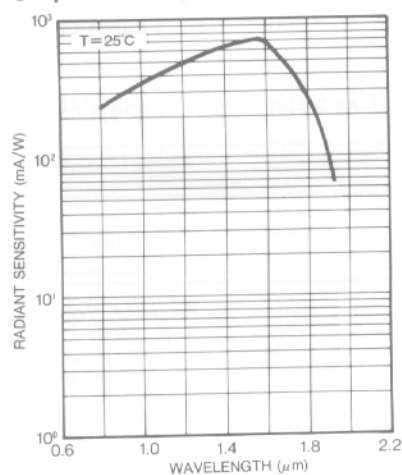


High-Speed Ge Photodiodes

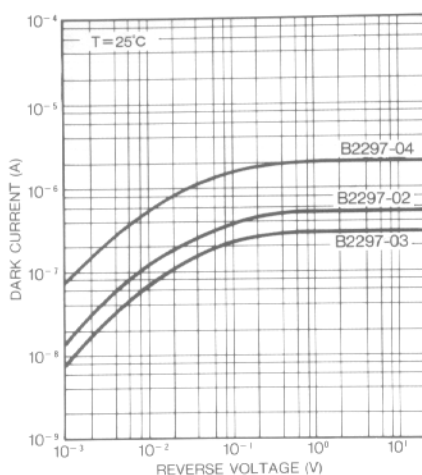
Type No.	Out-line NO. (P.28)	Package	Window Material ^A	Effective Sensitive Area Size (mm)	Effective Sensitive Area (mm ²)	Characteristics					
						Measure-ment Temp. (°C)	Peak Respon-sivity Wavelength λ_p (μ m)	IR Cutoff Wave-length λ_c (λ m)	Radiant Respon-sivity at λ_p (mA/W)	Short Circuit Current I_{sh} 100 lux, 2856K	
										Min. (μ A)	Typ. (μ A)
B2297-02	①	3 pin TO-18	B	$\phi 0.3$	0.07	+25	1.55	1.9	700	200	300
B2297-03		3 pin TO-18	B	$\phi 0.1$	0.008	+25	1.55	1.9	700	80	100
B2297-04		3 pin TO-18	B	$\phi 0.5$	0.2	+25	1.55	1.9	700	800	1000

^A B: Borosilicate glass window

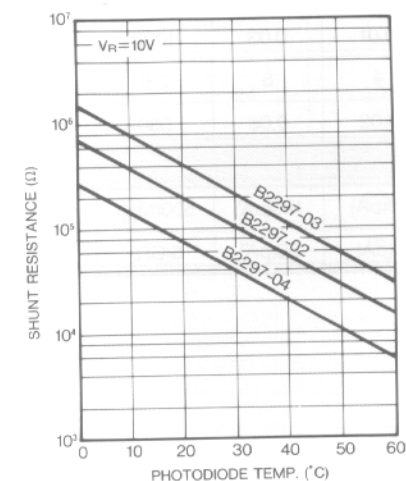
● Spectral Response



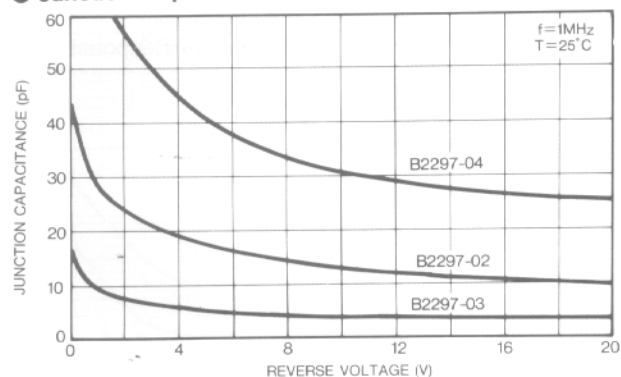
● Dark Current vs. Reverse Voltage



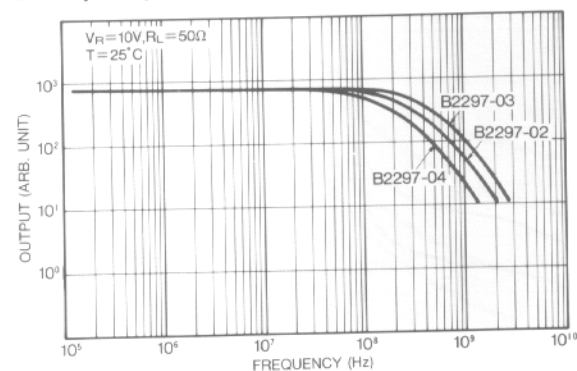
● Shunt Resistance vs. Temperature



● Junction Capacitance vs. Reverse Voltage



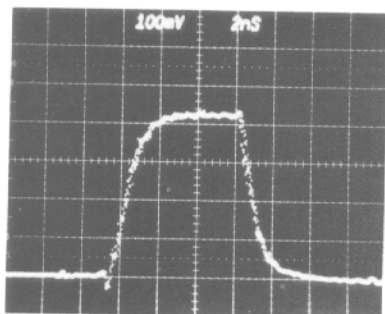
● Frequency Response



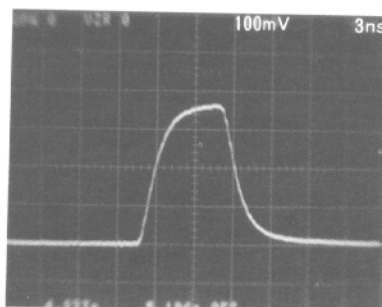
Characteristics										Temperature Range		Type No.
Dark Current I _d V _R =10V		Shunt Resistance R _{Sh} V _R =10mV (kΩ)	NEP at λ p (W/Hz ^{1/2})	D * at λ p (cmHz ^{1/2} W)	Junction Capacitance C _j V _R =10V, f=1MHz (pF)	Rise Time t _r V _R =10V R _L =50Ω 10~90% (ns)	Fall Time V _R =10V R _L =50Ω 10~90% (ns)	Cutoff Frequency f _c V _R =10V, R _L =50Ω (MHz)	Maximum Reverse Voltage V _R max. (V)	Operating (°C)	Storage (°C)	
Typ.	Max.											
(μA)	(μA)											
0.5	2	150	5×10 ⁻¹³	5×10 ¹⁰	12	1.5	1.5	200	20	-30~+60	-55~+80	B2297-02
0.3	1	300	5×10 ⁻¹³	2×10 ¹⁰	4	0.5	0.5	700	20	-30~+60	-55~+80	B2297-03
2	5	50	1×10 ⁻¹²	1.5×10 ¹¹	30	3.0	4.0	100	20	-30~+60	-55~+80	B2297-04

● Output Pulse Waveforms

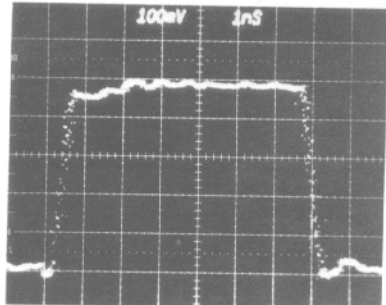
B2297-02



B2297-04

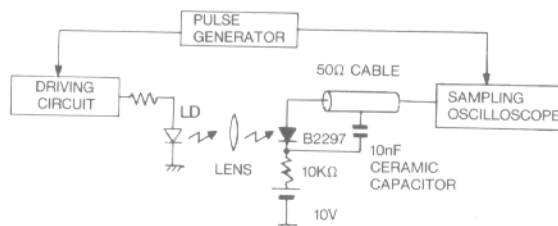


B2297-03

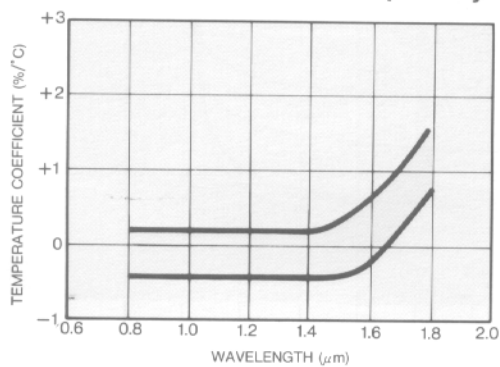


Measuring Block Diagram for Time Response

LD: Laser diode (1.3 μm step function light pulse)



● **Temperature Coefficient of Responsivity**



● Linearity (B2297-02)

