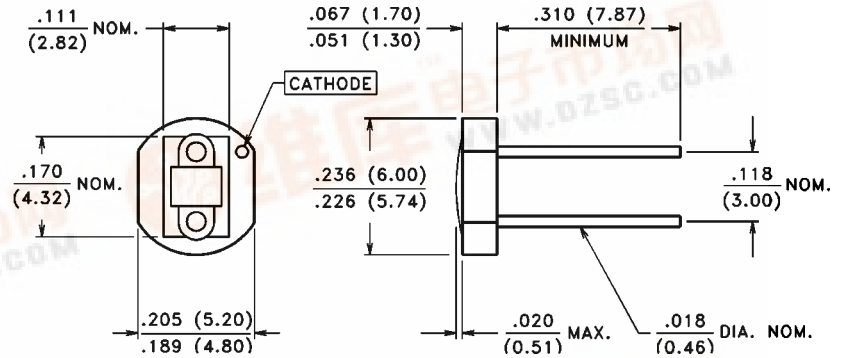


VTP Process Photodiodes

VTP9412



PACKAGE DIMENSIONS inch (mm)



CASE 20 6 mm CERAMIC

CHIP ACTIVE AREA: .0025 in² (1.6 mm²)

PRODUCT DESCRIPTION

Small area planar silicon photodiode in a recessed ceramic package. Chip is coated with a protective layer of clear epoxy. These diodes exhibit low dark current under reverse bias and fast speed of response.

ABSOLUTE MAXIMUM RATINGS

Storage Temperature: -20°C to 75°C
Operating Temperature: -20°C to 75°C

ELECTRO-OPTICAL CHARACTERISTICS @ 25°C (See also VTP curves, page 46)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	VTP9412			UNITS
			Min.	Typ.	Max.	
I _{SC}	Short Circuit Current	H = 100 fc, 2850 K	10	17		μA
TC I _{SC}	I _{SC} Temperature Coefficient	2850 K		.20		%/°C
V _{OC}	Open Circuit Voltage	H = 100 fc, 2850 K		350		mV
TC V _{OC}	V _{OC} Temperature Coefficient	2850 K		-2.0		mV/°C
I _D	Dark Current	H = 0, V _R = 50 V			7	nA
R _{SH}	Shunt Resistance	H = 0, V = 10 mV		.4		GΩ
C _J	Junction Capacitance	H = 0, V = 15 V			6	pF
Re	Responsivity	940 nm		.011		A/(W/cm ²)
S _R	Sensitivity	@ Peak		.55		A/W
λ _{range}	Spectral Application Range		400		1150	nm
λ _p	Spectral Response - Peak			925		nm
V _{BR}	Breakdown Voltage		50	140		V
θ _{1/2}	Angular Resp. - 50% Resp. Pt.			±50		Degrees
NEP	Noise Equivalent Power		8.7 x 10 ⁻¹⁴ (Typ.)			W/√Hz
D*	Specific Detectivity		1.5 x 10 ¹² (Typ.)			cm√Hz / W