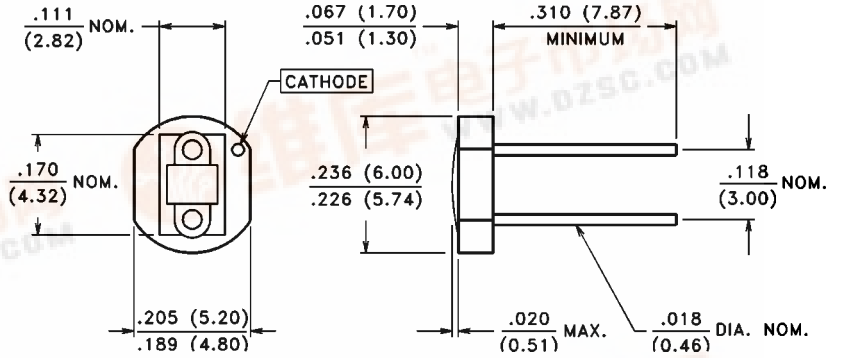


VTB Process Photodiodes

VTB9412, 9413



PACKAGE DIMENSIONS inch (mm)



CASE 20 6 mm CERAMIC
CHIP ACTIVE AREA: .0025 in² (1.60 mm²)

PRODUCT DESCRIPTION

Small area planar silicon photodiode in a recessed ceramic package. The chip is coated with a protective layer of clear epoxy. These diodes have very high shunt resistance and have good blue 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 VTB curves, pages 21-22)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	VTB9412			VTB9413			UNITS
			Min.	Typ.	Max.	Min.	Typ.	Max.	
I _{SC}	Short Circuit Current	H = 100 fc, 2850 K	8	13		8	13		μA
TC I _{SC}	I _{SC} Temperature Coefficient	2850 K		.12	.23		.12	.23	%/°C
V _{OC}	Open Circuit Voltage	H = 100 fc, 2850 K		490			490		mV
TC V _{OC}	V _{OC} Temperature Coefficient	2850 K		-2.0			-2.0		mV/°C
I _D	Dark Current	H = 0, VR = 2.0 V			100			20	pA
R _{SH}	Shunt Resistance	H = 0, V = 10 mV		.25			7.0		GΩ
TC R _{SH}	R _{SH} Temperature Coefficient	H = 0, V = 10 mV		-8.0			-8.0		%/°C
C _J	Junction Capacitance	H = 0, V = 0		.31			.31		nF
S _R	Sensitivity	365 nm		.09			.09		A/W
λ _{range}	Spectral Application Range		320		1100	320		1100	nm
λ _p	Spectral Response - Peak			920			920		nm
V _{BR}	Breakdown Voltage		2	40		2	40		V
θ _{1/2}	Angular Resp. - 50% Resp. Pt.			±50			±50		Degrees
NEP	Noise Equivalent Power			3.0 x 10 ⁻¹⁴ (Typ.)		5.9 x 10 ⁻¹⁵ (Typ.)			W/√Hz
D*	Specific Detectivity			4.2 x 10 ¹² (Typ.)		2.1 x 10 ¹³ (Typ.)			cm√Hz / W

