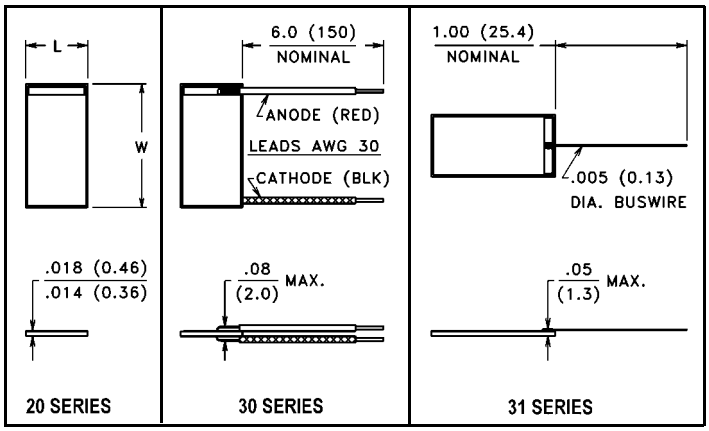
VTS Process Photodiodes

VTS__86H

PRODUCT DESCRIPTION

This series of planar, P on N, large area silicon photodiodes is characterized for use in the photovoltaic (unbiased) mode. Their excellent speed and broadband sensitivity makes them ideal for detecting light from a variety of sources such as LEDs, IREDs, flashtubes, incandescent lamps, lasers, etc. Improved shunt resistance minimizes amplifier offset and drift in high gain systems. The solderable contact system on these photodiodes provides a cost effective design solution for many applications.

PACKAGE DIMENSIONS inch (mm)



ABSOLUTE MAXIMUM RATINGS

Storage Temperature:

-40°C to 150°C	Series 20, 31
-40°C to 105°C	Series 30

Operating Temperature:

-40°C to 125°C	Series 20, 31
-40°C to 105°C	Series 30

CASE 44B
ANODE (ACTIVE) SURFACE SHOWN
CATHODE IS BACKSIDE

DIMENSIONS	VTS__86
L	.100 (2.54)
W	.200 (5.08)
ACTIVE AREA	$.015^2$ (10^2)

RoHS Compliant

ELECTRO-OPTICAL CHARACTERISTICS @ 25°C (See also VTS curves, page 67)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	VTS__86H			UNITS
			Min.	Typ.	Max.	
I_{SC}	Short Circuit Current	H = 1000 lux, 2850 K	60	80		µA
TC I_{SC}	I_{SC} Temperature Coefficient	H = 1000 Lux, 2850 K		.20		%/°C
I_D	Dark Current	H = 0, VR = 100 mV		10	100	nA
TC I_D	ID Temp. Coefficient	H = 0, VR = 100 mV		+11		%/°C
R_{SH}	Shunt Resistance	H = 0, VR = 10 mV		6.0		MΩ
C_J	Junction Capacitance	H = 0, V = 0 V, 1 MHz		0.25		nF
S_R	Sensitivity	@ 400 nm	.18	0.20		A/W
Re	Responsivity	400 nm, 0.18 A/W		0.02		$A/(W/cm^2)$
TC V_{OC}	Sensitivity @ Peak	925 nm		0.60		A/W
t_R/t_F	Response Time @ 1 kΩ Load	VR = 1 V, 830 nm		0.75		µsec
V_{OC}	Open Circuit Voltage	H = 1000 Lux, 2850 K	0.25	0.45		Volts
TC V_{OC}	V_{OC} Temperature Coefficient	H = 1000 Lux, 2850 K		-2.6		mV/°C

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