

Product Change Notice

Issue Date: 04-JUNE-2024

Change Description:

Change of manufacturing site and dice for 5mm through-hole photodiode and phototransistor products family.

Parts Affected:

Photodiodes:

HLPD-B0D0-00000

HLPD-B0F0-00000

HLPD-B0H0-00000

Phototransistors:

HLPT-B5D0-00000

HLPT-B5G0-00000

HLPT-B5K0-00000

Description and Extent of Change:

Introduction of new manufacturing site and dice as current manufacturing site has ceased operation and existing dice are no longer available.

Reason for Change:

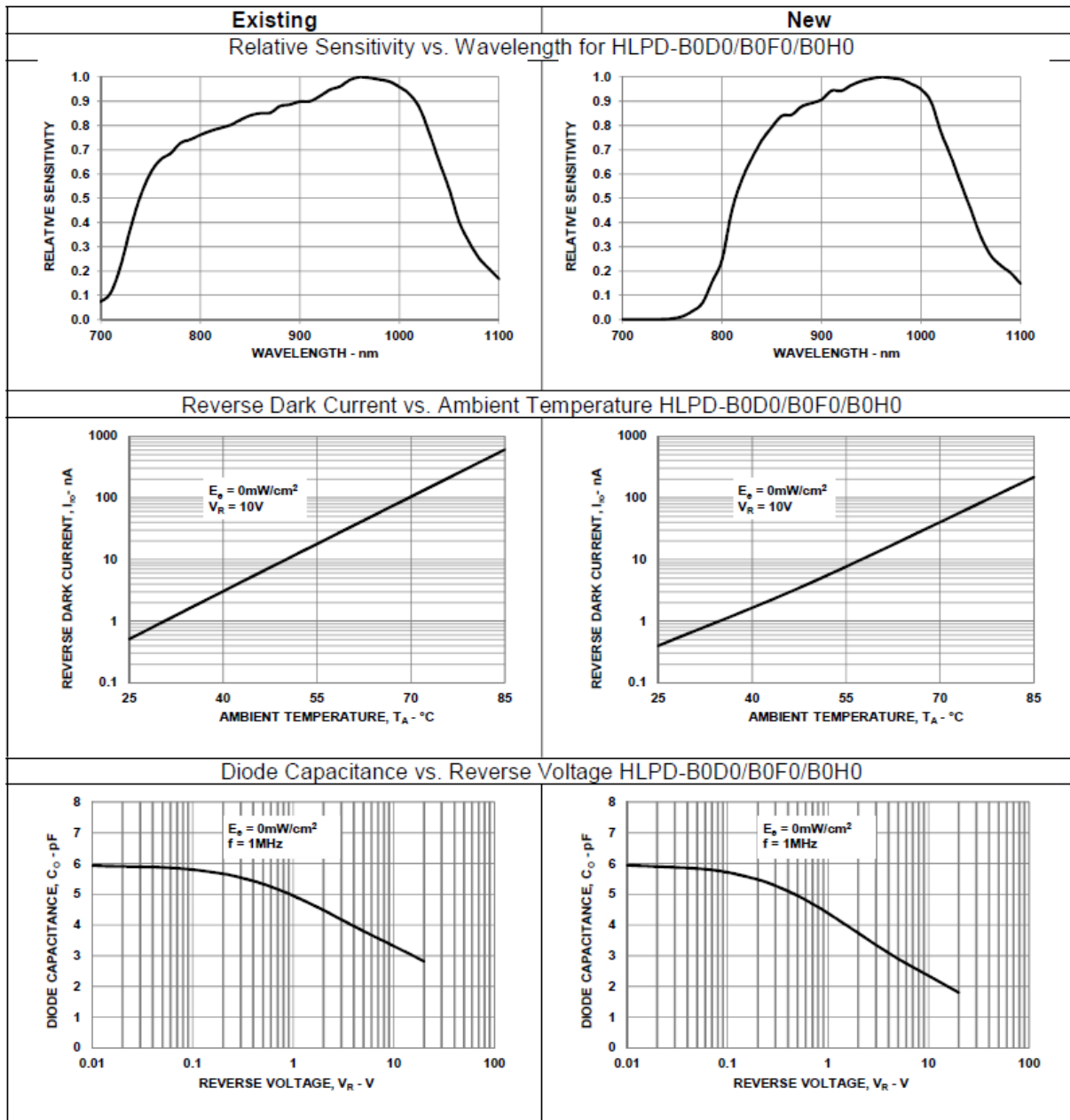
Assurance of supply.

Effect of Change on Fit, Form, Function, Quality, or Reliability:

There is no change in the fit, form, quality and reliability of the affected parts. Following are the changes in the product functions;

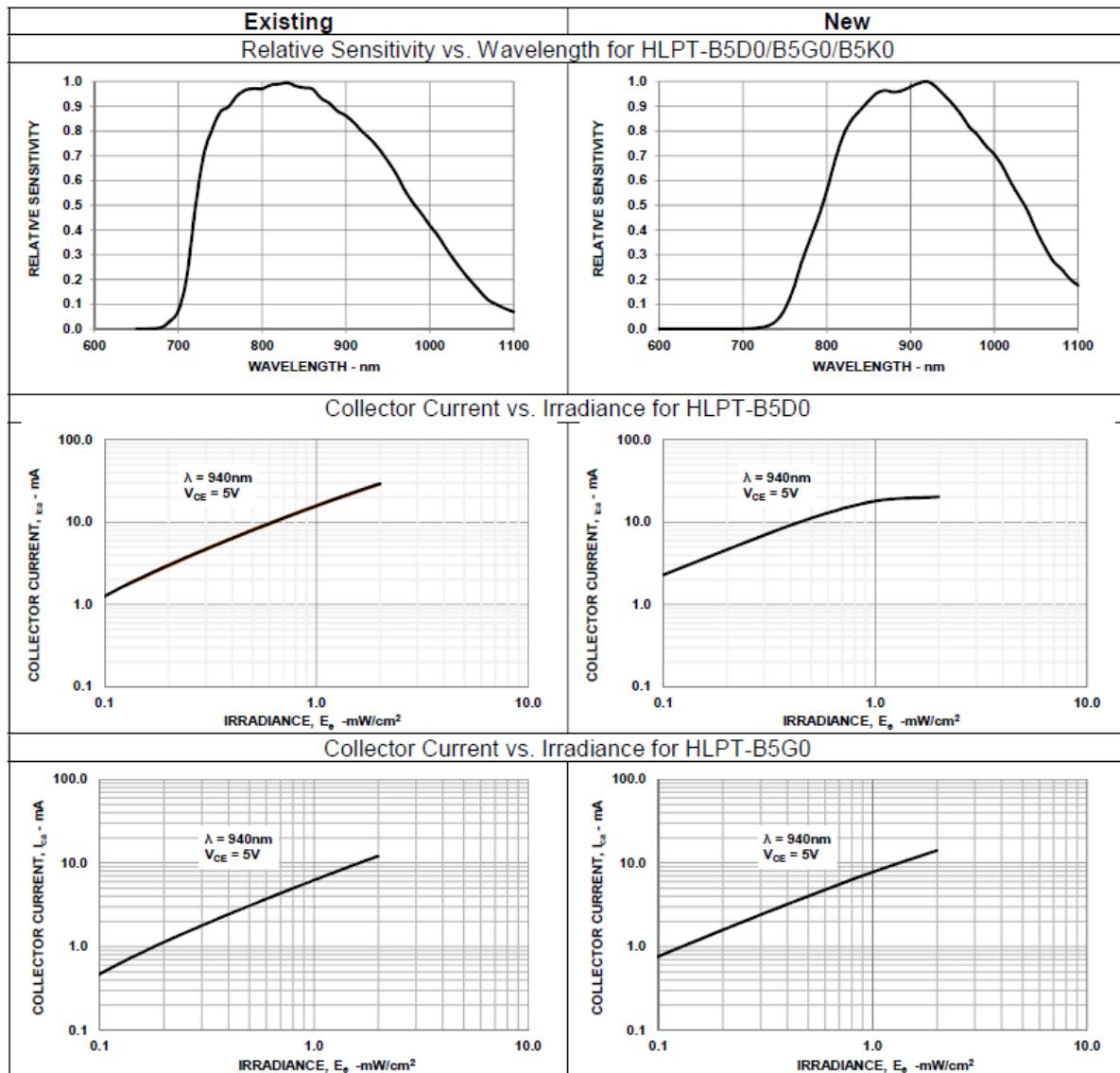
Photodiodes:

Part Number	Parameter	Symbol	Existing			New			Units	Test Conditions
			Min.	Typ.	Max.	Min.	Typ.	Max.		
HLPD-B0D0-00000	Open Circuit Voltage	V_{OC}	-	393	-	-	419	-	mV	$E_e = 1\text{mW/cm}^2$, $\lambda = 940\text{ nm}$
HLPD-B0F0-00000			-	355	-	-	368	-		
HLPD-B0H0-00000			-	345	-	-	362	-		
HLPD-B0D0-00000	Short Circuit Current	I_{SC}	-	61.7	-	-	74	-	μA	$E_e = 1\text{mW/cm}^2$, $\lambda = 940\text{ nm}$
HLPD-B0F0-00000			-	33	-	-	35	-		
HLPD-B0H0-00000			-	27	-	-	31	-		
HLPD-B0D0-00000 HLPD-B0F0-00000 HLPD-B0H0-00000	Spectral Range of Sensitivity	λ	700	-	1100	750	-	1100	nm	-
	Temperature Coefficient of V_{OC}	TC_{VOC}	-	-2.92	-	-	-2.33	-	mV/°C	$E_e = 1\text{mW/cm}^2$, $\lambda = 940\text{ nm}$
	Temperature Coefficient of I_{SC}	TC_{ISC}	-	-0.71	-	-	-0.52	-	%/°C	$E_e = 1\text{mW/cm}^2$, $\lambda = 940\text{ nm}$
	Forward Voltage	V_F	-	0.86	-	-	0.77	-	V	$I_F = 10\text{ mA}$



Phototransistors:

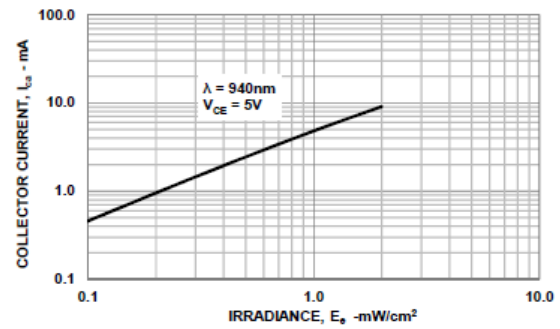
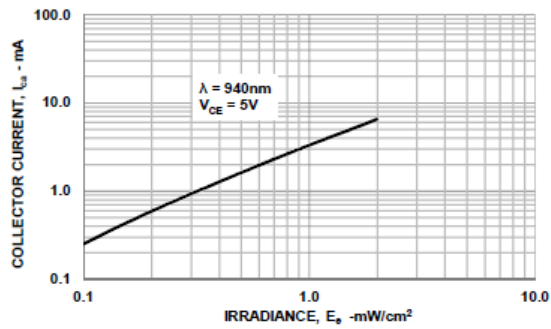
Part Number	Parameter	Symbol	Existing			New			Units	Test Conditions
			Min.	Typ.	Max.	Min.	Typ.	Max.		
HLPT-B5G0-00000	Collector Light Current	I_{ca}	1.6	3.0	4.0	2.1	4.0	5.3	mA	$E_e = 0.5\text{mW/cm}^2$, $\lambda = 940\text{ nm}$, $V_{CE} = 5\text{V}$
HLPT-B5K0-00000			1.0	1.6	2.5	1.5	2.4	3.8		
HLPT-B5D0-00000 HLPT-B5G0-00000 HLPT-B5K0-00000	Spectral Range of Sensitivity	λ	700	-	1100	720	-	1100	nm	-
	Wavelength of Peak Sensitivity	λ_{max}	-	830	-	-	920	-	nm	-
	Collector-Emitter Capacitance	C_{CE0}	-	6.5	-	-	5.7	-	pF	$V_{CE} = 0\text{V}$, $f = 1\text{MHz}$, $E_e = 0\text{mW/cm}^2$



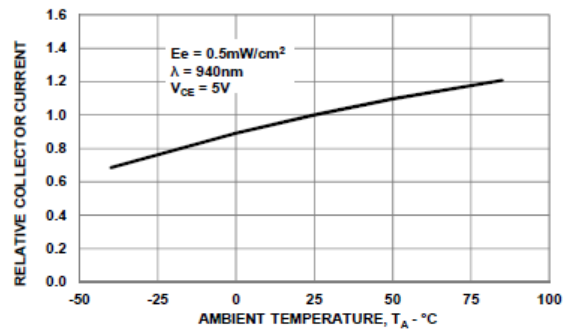
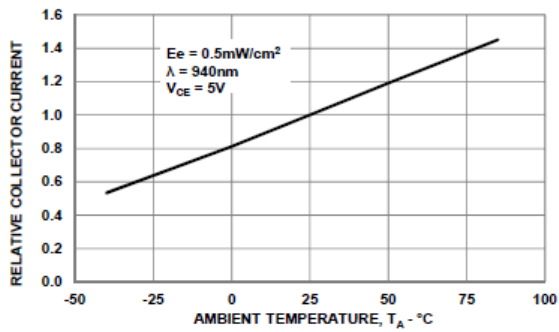
Existing

New

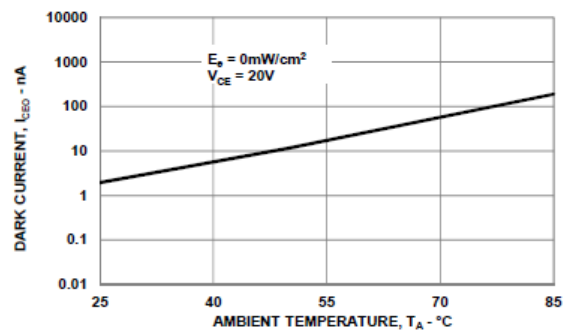
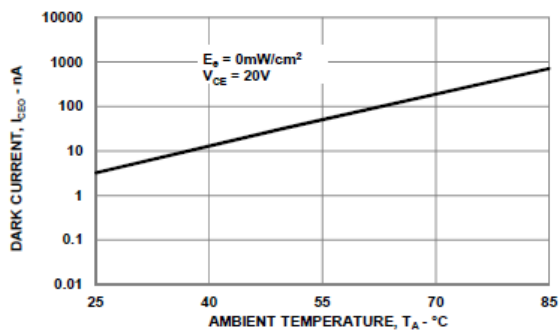
Collector Current vs. Irradiance for HLPT-B5K0



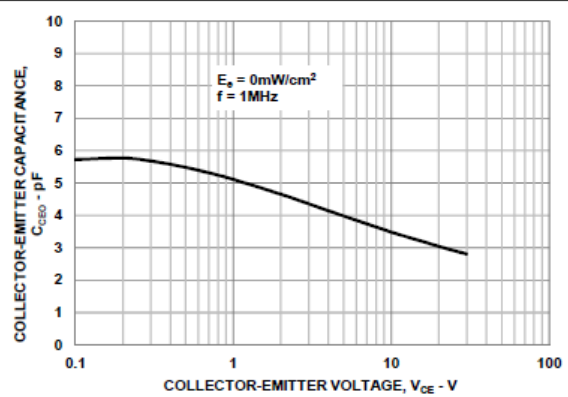
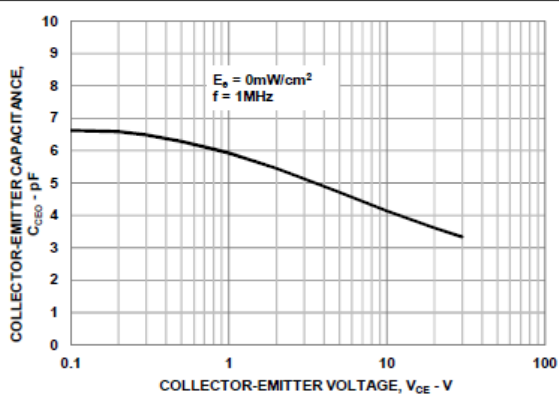
Relative Collector Current vs. Ambient Temperature HLPT-B5D0/B5G0/B5K0

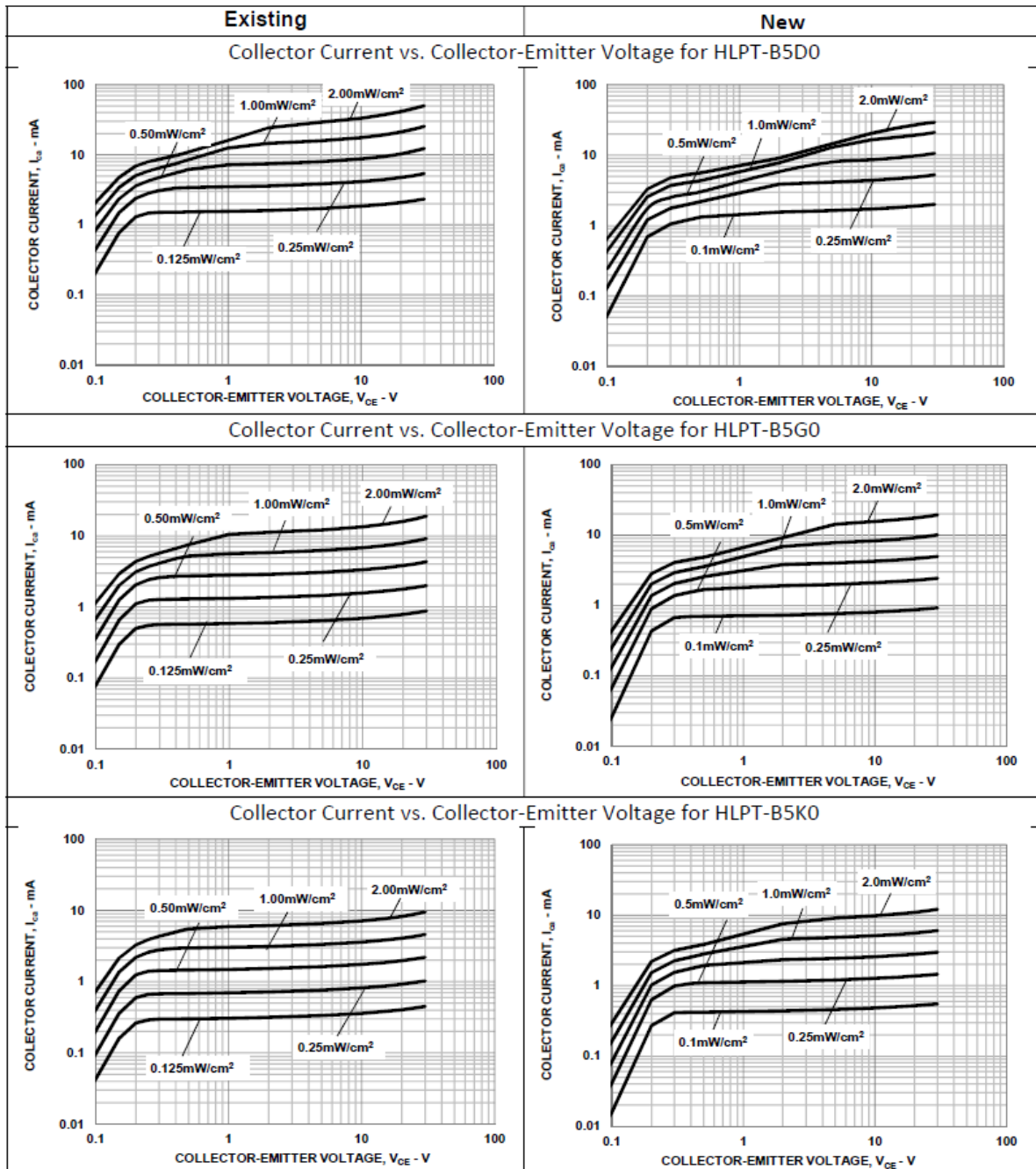


Dark Current vs. Ambient Temperature HLPT-B5D0/B5G0/B5K0



Collector-Emitter Capacitance vs. Collector-Emitter Voltage HLPT-B5D0/B5G0/B5K0





Effective Date of Change:

The changes will be implemented starting 4th September 2024.

Qualification Data:

Qualification data will be available upon request.

Please contact your Broadcom field sales engineer or Contact Center for any questions or support requirements. Please acknowledge the receipt of the notice within 30 days of delivery. Lack of acknowledgement within 30 days constitutes acceptance of the change per JEDEC J-STD-046.