

NPN Silicon Phototransistors

OP515A, OP515B, OP515C, OP515D,
OP516A, OP516B, OP516C, OP516D

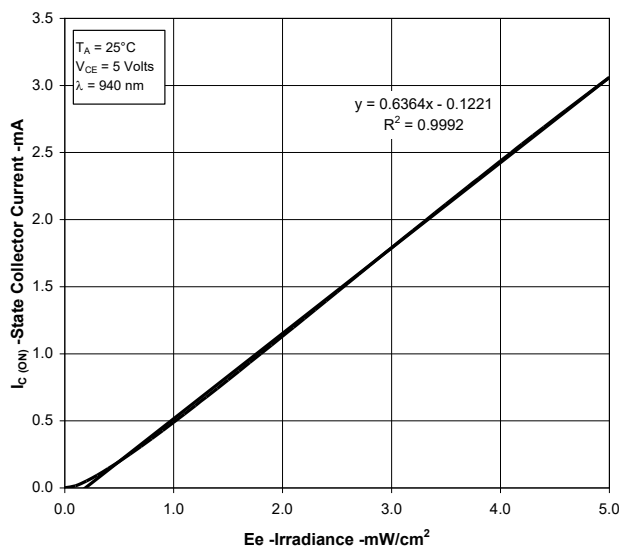


Symbol	Parameter	Min	Typ	Max	Units	Test Conditions
$I_{C(ON)}$	On-State Collector Current OP515D/OP516D OP515C/OP516C OP515B/OP516B OP515A/OP516A	0.40 1.00 3.00 6.00			mA	$V_{CE} = 5\text{ V}$, $E_e = 5.0\text{ mW/cm}^2^{(3)}$
I_{CEO}	Collector-Dark Current			100	nA	$V_{CE} = 10\text{ V}$, $E_e = 0^{(4)}$
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	30			V	$I_C = 100\text{ }\mu\text{A}$
$V_{(BR)ECO}$	Emitter-Collector Breakdown Voltage	5			V	$I_E = 100\text{ }\mu\text{A}$
$V_{CE(SAT)}$	Collector-Emitter Saturation Voltage OP515/OP516			0.40	V	$I_C = 400\text{ }\mu\text{A}$, $E_e = 5.0\text{ mW/cm}^2^{(3)}$
$\Delta I_C/\Delta T$	Relative I_C Changes with Temperature OP505A-D and OP506A-D series		1.00		%/°C	$V_{CE} = 5\text{ V}$, $E_e = 1.0\text{ mW/cm}^2$
I_{ECO}	Emitter-Reverse Current			100	μA	$V_{EC} = 0.4\text{ V}$

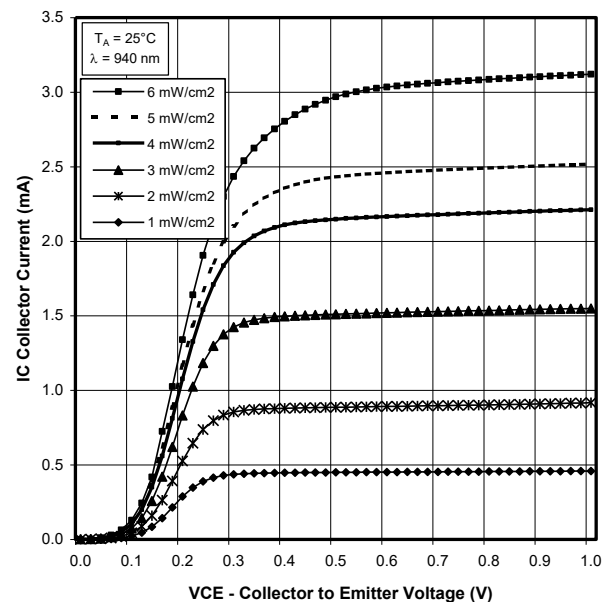
Notes:

- (1) $E_{e(APT)}$ is a measurement of the average apertured radiant energy incident upon a sensing area 0.250" (6.35mm) in diameter and perpendicular to and centered to the mechanical axis of the emitting surface at a distance of 0.466" (11.84mm). $E_{e(APT)}$ is not necessarily uniform within the measured area.
- (2) Derating linearly 0.71 mW/°C above 25°C
- (3) Light source is an unfiltered GaAs LED with a peak emission wavelength of 935 nm and a radiometric intensity level which varies less than 10% over the entire lens surface of the phototransistor being tested.
- (4) To calculate typical collector dark current in nA, use the formula $I_{CED} = 10^{(0.040T_A - 3.4)}$ where T_A is ambient temperature in °C.

On-State Collector Current Vs Irradiance



Collector Current Vs Collector to Emitter Voltage vs Irradiance



General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

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