



**THE DATASHEET OF
HOA0867-L55**



HOA086X/087X

Transmissive Sensor

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
IR EMITTER						
Forward Voltage	V_F		1.6		V	$I_F=20$ mA
Reverse Leakage Current	I_R		10		μ A	$V_R=3$ V
DETECTOR						
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	30			V	$I_C=100$ μ A
Emitter-Collector Breakdown Voltage	$V_{(BR)ECO}$	5.0			V	$I_E=100$ μ A
Collector Dark Current	I_{CEO}		100		nA	$V_{CE}=10$ V, $I_F=0$
COUPLED CHARACTERISTICS						
On-State Collector Current	$I_{C(ON)}$				mA	
Parameter A (HOA0860/0865/0870/0875)		0.5				$V_{CE}=10$, $I_F=20$ mA
Parameter B (HOA0861/0866/0871/0876)		1.0				$V_{CE}=5$ V, $I_F=10$ mA
Parameter C (HOA0862/0867/0872/0877)		1.8				$V_{CE}=0.6$, $I_F=20$ mA
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$				V	
Parameter A (HOA0860/0865/0870/0875)			0.4			$I_C=0.4$ mA, $I_F=20$ mA
Parameter B (HOA0860/0866/0871/0876)			0.4			$I_C=0.8$ mA, $I_F=10$ mA
Parameter C (HOA0862/0867/0872/0877)			0.6			$I_C=1.8$ mA, $I_F=20$ mA
Rise And Fall Time	t_r, t_f		15		μ s	$V_{CC}=5$ V, $I_C=1$ mA $R_L=1000$ Ω

ABSOLUTE MAXIMUM RATINGS

(25°C Free-Air Temperature unless otherwise noted)

Operating Temperature Range	-40°C to 85°C
Storage Temperature Range	-40°C to 85°C
Soldering Temperature (5 sec)	240°C

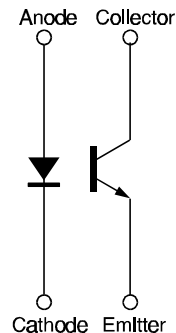
IR EMITTER

Power Dissipation	100 mW ⁽¹⁾
Reverse Voltage	3 V
Continuous Forward Current	50 mA

DETECTOR

Collector-Emitter Voltage	30 V
Emitter-Collector Voltage	5 V
Power Dissipation	100 mW ⁽¹⁾
Collector DC Current	30 mA

SCHEMATIC



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Fig. 1 IRED Forward Bias Characteristics

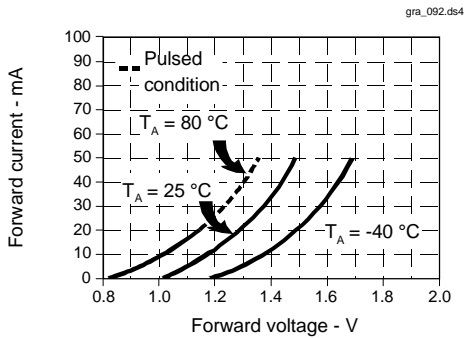


Fig. 2 Non-Saturated Switching Time vs Load Resistance

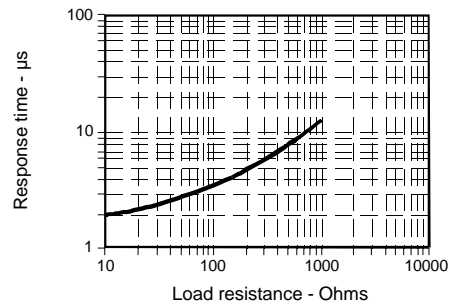


Fig. 3 Dark Current vs Temperature

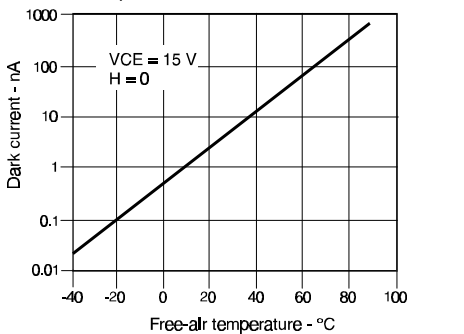
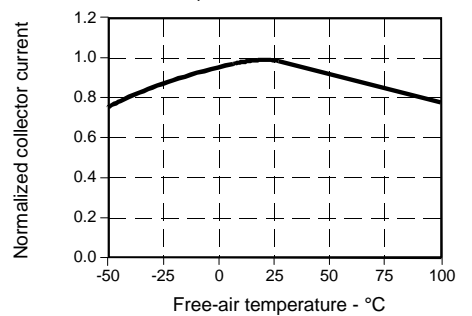


Fig. 4 Collector Current vs Ambient Temperature



All Performance Curves Show Typical Values

PART NUMBER GUIDE

HOA08XX-XXX

Housing Material

- 6 = Polysulfone, IR transmissive
- 7 = Polysulfone, opaque

Mechanical and Electrical Specifications

- 0 = Electrical Parameter A/lead spacing .320 in. (8.13 mm)
- 1 = Electrical Parameter B/lead spacing .320 in. (8.13 mm)
- 2 = Electrical Parameter C/lead spacing .320 in. (8.13 mm)
- 5 = Electrical Parameter A/lead spacing .220 in. (5.59 mm)
- 6 = Electrical Parameter B/lead spacing .220 in. (5.59 mm)
- 7 = Electrical Parameter C/lead spacing .220 in. (5.59 mm)

*0.010 in. (.25 mm) aperture available with electrical Parameter A only

Aperture Width In Front Of Detector

- *1 = 0.010 in. (0.25 mm)
 - 5 = 0.050 in. (1.27 mm)
- Aperture length is 0.060 in. (1.52 mm)

Aperture Width In Front Of IRED

- 5 = 0.050 in. (1.27 mm)
- Aperture length is 0.060 in. (1.52 mm)

Mounting Configuration

- L = Single mounting tab, emitter side
- N = No mounting tabs
- P = Single mounting tab, detector side
- T = Two mounting tabs

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277

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- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management