

ROHM**OPTOELECTRONICS****RPI-441****PHOTO INTERRUPTER****ABSOLUTE MAXIMUM RATINGS (TA=25°C)***Infrared Emitter*

Forward Current	I_F	50mA
Reverse Voltage	V_R	5V
Power Dissipation	P_d	80mW

Phototransistor

Collector-Emitter Voltage	V_{CEO}	30V
Emitter-Collector Voltage	V_{ECO}	4.5V
Collector Power Dissipation	P_C	80mW

Operating Temperature

Topr -25°C~+85°C

Storage Temperature

Tstg -30°C~+85°C

*Soldering Temperature *1*

Tsol 260°C

(*1:3 sec)

ELECTRICAL OPTICAL CHARACTERISTICS (TA=25°C)

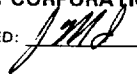
1) ELECTRICAL-OPTICAL CHARACTERISTICS OF THE INFRARED LIGHT EMITTING DIODE

Item	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage	V_F	-	1.3	1.5	V	$I_F=50mA$
Reverse Current	I_R	-	-	10	mA	$V_R=5V$
Terminal Capacitance	C_T	-	50	-	pF	$V_R=0V, f=1MHz$
Input-Output Frequency	fc		1		MHz	$I_F=50mA$
Peak Emission Wavelength	λ_p		950		nm	$I_F=50mA$

2) ELECTRICAL-OPTICAL CHARACTERISTICS OF THE PHOTOTRANSISTOR

Item	Symbol	Min.	Typ.	Max.	Unit	Condition
Dark Current	I_{CEO}	-	-	0.5	mA	$V_{CE}=10V$
Collector-Emitter Breakdown Voltage	BV_{CEO}	30	-	-	V	$I_{CE}=50mA$
Emitter-Collector Breakdown Voltage	BV_{ECO}	4.5	-	-	V	$I_{EC}=50mA$
Peak Sensitivity Wavelength	λ_p		800		nm	-
Response Time Constant	-	-	10	-	ms	$V_C=5V, I_C=1mA, R_L=100\Omega$

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APPROVED:  DATE: 8-24-93

RPI441.PM5, OPTOELECTRONICS, 0-42 7/28/93

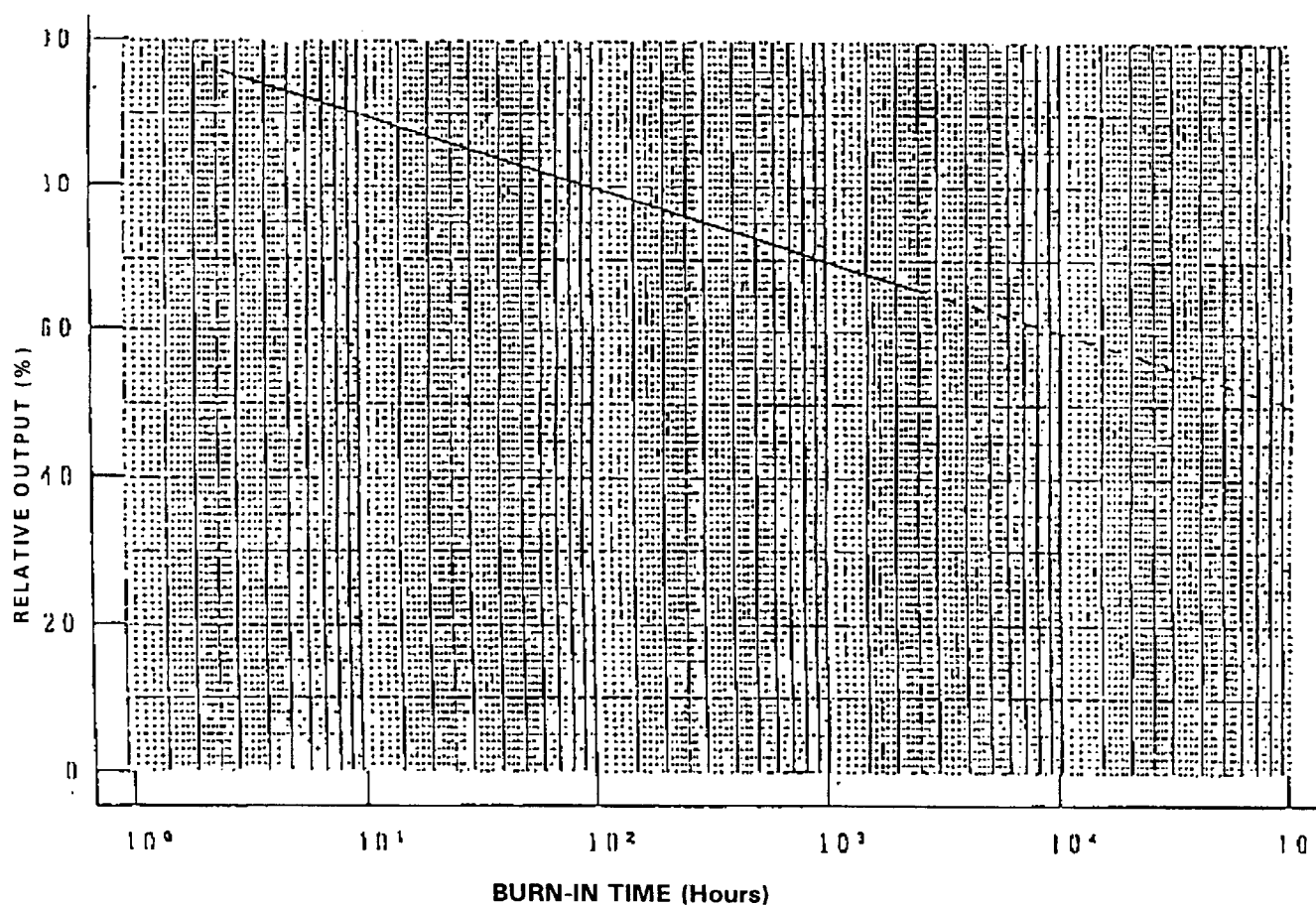
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2) ELECTRICAL-OPTICAL CHARACTERISTICS OF THE PHOTOTRANSISTOR (Continued from page one)

Item	Symbol	Min	Typ	Max	Unit	Condition
Collector Current	I_C	0.2	1.0	-	mA	$V_{CE} = 5V, I_F = 20mA$
Collector-Emitter Saturation Voltage	$V_{CE}(Sat)$	-	-	0.4	V	$I_F = 20mA, I_C = 1.0 mA$
Rise Time, Fall Time	t_r, t_f	-	10	-	μS	$V_{CE} = 5V, I_C = 2mA, R_L = 100\Omega$

Type No.	RPI-441
Data	A Burn-In Degradation
Condition	$I_F = 20mA$ $V_C = 5V$ $T_a = 25^\circ C$



THIS CURVE IS MAX DEGRADATION

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