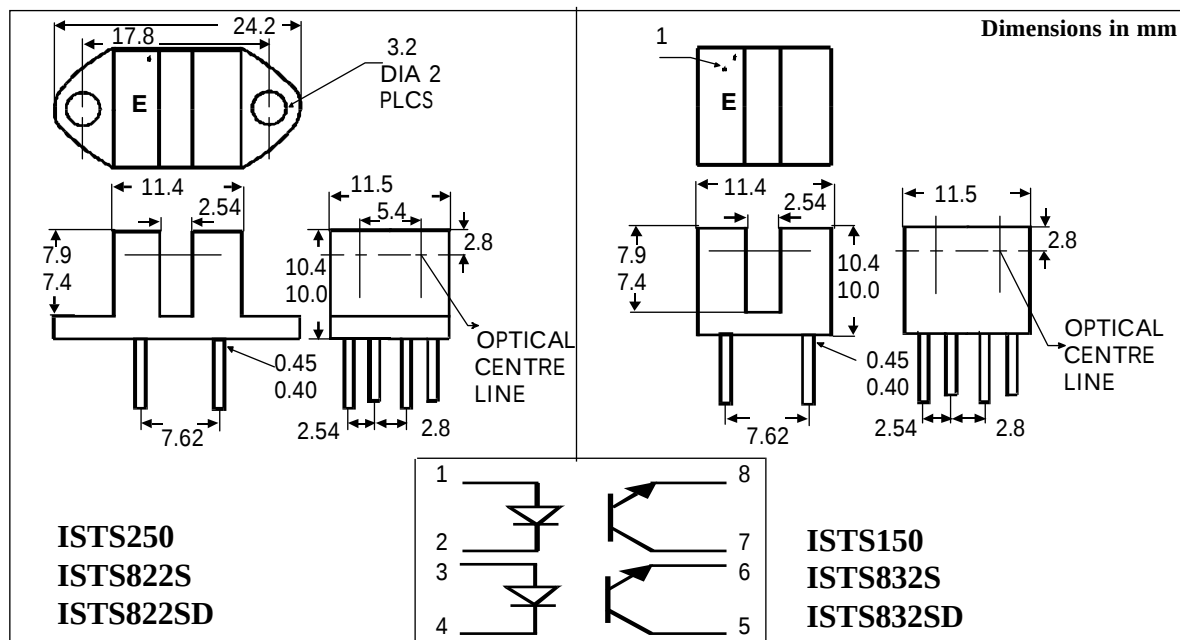


TRANSMISSIVE OPTO-ELECTRONIC DUAL CHANNEL SLOTTED INTERRUPTER SWITCHES WITH TRANSISTOR SENSORS



DESCRIPTION

This series of photointerrupters are dual channel switches consisting of two Gallium Arsenide infrared emitting diodes and two NPN silicon photo transistors mounted in a "side by side" configuration on opposite sides of a 2.5mm wide slot. Dual channels enable direction of travel sensing. The transmissive housing reduces possible interference from ambient light and provides dust and dirt protection. In addition the ISTS822S, ISTS832S have 0.25mm apertures in front of the phototransistors, While the ISTS822SD, ISTS832SD have the same sized apertures in front of both emitters and phototransistors

FEATURES

- Single or Double apertures for High Resolution
- 2.5mm Gap between LED and Detector
- Dual channels "side by side"

APPLICATIONS

- Copiers, Printers, Facsimilies, Record Players, Cassette Decks, VCR's

ABSOLUTE MAXIMUM RATINGS (25°C unless otherwise specified)

Storage Temperature _____ -40°C to + 85°C
Operating Temperature _____ -25°C to + 85°C
Lead Soldering Temperature
(1/16 inch (1.6mm) from case for 10 secs) 260°C

INPUT DIODE

Forward Current _____ 50mA
Reverse Voltage _____ 5V
Power Dissipation _____ 75mW

OUTPUT TRANSISTOR

Collector-emitter Voltage BV_{CEO} _____ 30V
Emitter-collector Voltage BV_{ECO} _____ 5V
Collector Current I_C _____ 20mA
Power Dissipation _____ 75mW

ISOCOM COMPONENTS LTD

Unit 25B, Park View Road West,
Park View Industrial Estate, Brenda Road
Hartlepool, Cleveland, TS25 1YD
Tel: (01429) 863609 Fax :(01429) 863581

ISOCOM INC

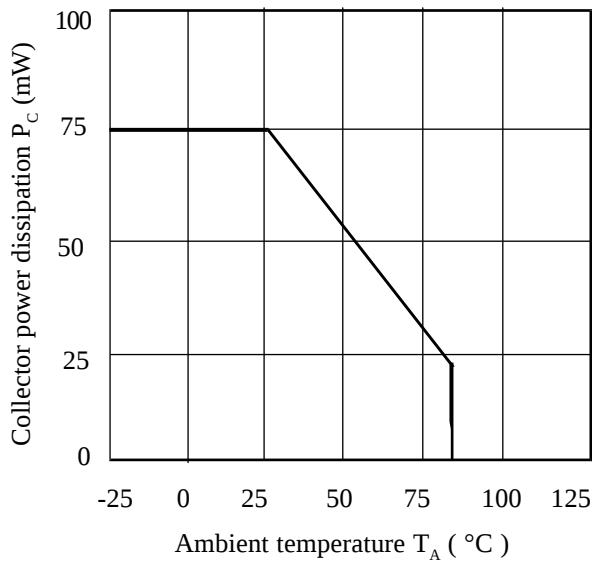
720 E., Park Boulevard, Suite 104,
Plano, TX 75074 USA
Tel: (972) 423-5521
Fax: (972) 422-4549

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ Unless otherwise noted)

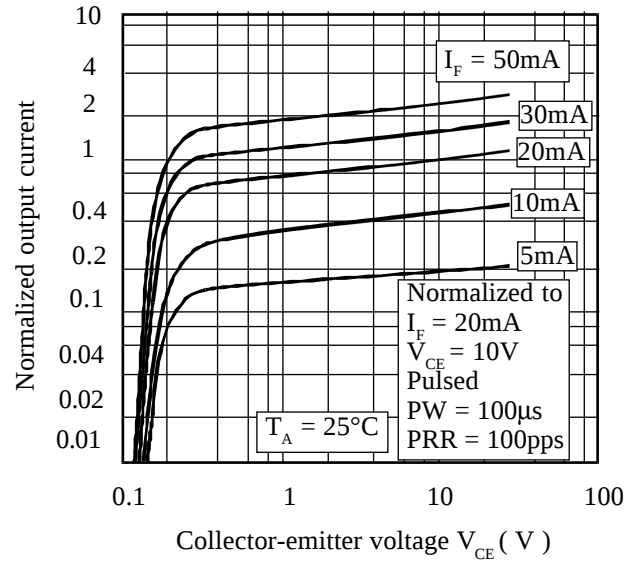
PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITION
Input	Forward Voltage (V_F)	3	1.2	1.6	V	$I_F = 20\text{mA}$ $I_R = 10\mu\text{A}$ $V_R = 3\text{V}$
	Reverse Voltage (V_R)			10	V	
	Reverse Current (I_R)				μA	
Output	Collector-emitter Breakdown (BV_{CEO}) (Note 1)	30			V	$I_C = 1\text{mA}$
	Emitter-collector Breakdown (BV_{ECO})	5			V	$I_E = 100\mu\text{A}$
	Collector-emitter Dark Current (I_{CEO})			100	nA	$V_{CE} = 10\text{V}$
Coupled	On-State Collector Current I_C (I_{ON}) (Note 1)					
	ISTS150, ISTS250 (no apertures)	250			μA	$20\text{mA } I_F, 10\text{V } V_{CE}$
	ISTS822S, ISTS832S (0.25mm apertures phototransistors only)	250			μA	$20\text{mA } I_F, 10\text{V } V_{CE}$
	ISTS822SD, ISTS832SD (0.25mm apertures in front of both - - emitters and phototransistors)	100			μA	$20\text{mA } I_F, 10\text{V } V_{CE}$
	Collector-emitter Saturation Voltage $V_{CE(SAT)}$					
	ISTS150, ISTS250			0.4	V	$20\text{mA } I_F, 125\mu\text{A } I_C$
	ISTS822S, ISTS832S			0.4	V	$20\text{mA } I_F, 125\mu\text{A } I_C$
	ISTS822SD, ISTS832SD			0.4	V	$20\text{mA } I_F, 50\mu\text{A } I_C$
	Rise Time t_r		6		μs	$V_{CC} = 5\text{V},$ $I_F = 20\text{mA}, R_L = 100\Omega$
	Fall Time t_f		6		μs	

Note 1 Special Selections are available on request. Please consult the factory.

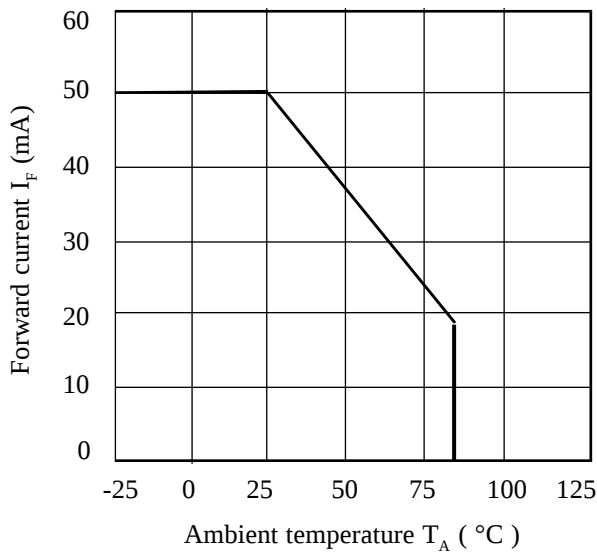
Collector Power Dissipation vs. Ambient Temperature



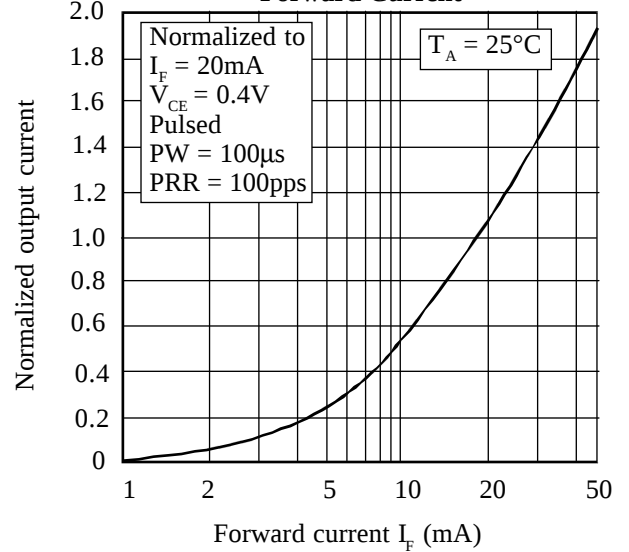
Normalized Output Current vs. Collector-emitter Voltage



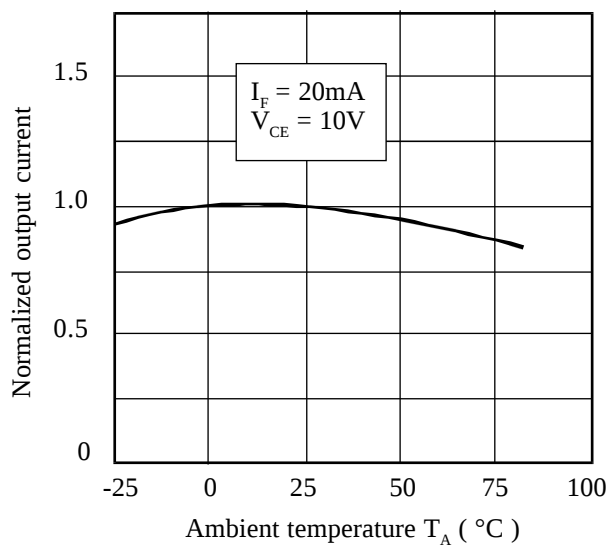
Forward Current vs. Ambient Temperature



Normalized Output Current vs. Forward Current



Normalized Output Current vs. Ambient Temperature



Collector-emitter Saturation Voltage vs. Ambient Temperature

