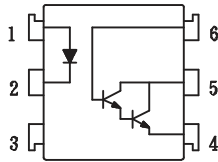


### Schematic:



For dimensions and pin-outs, see the last page of this document.

### Features:

- High current transfer ratio  
(CTR:MIN.500% at  $I_F=10\text{mA}$ ,  $V_{CE}=5\text{V}$ )  
MIN 200% at  $I_F=1\text{mA}$ ,  $V_{CE}=1\text{V}$ )
- High isolation voltage between input and output  
(Viso:5300Vrms).

### Ordering:

Suffix to Standard Part Number

- V = VDE Compliant
- G = 10mm Lead Spread
- S = Surface Mount Lead-form
- T = Tape & Reel

### Superior OPTO Part Number:

**OPTO621**

### Absolute Maximum Ratings

( $T_a=25^\circ\text{C}$ )

Parameter	Symbol	Rating	Unit	
Input	Forward current	$I_F$	50	mA
	Peak forward current	$I_{FM}$	1	A
	Reverse voltage	$V_R$	6	V
	Power dissipation	$P_D$	70	mW
Output	Collector-emitter voltage	$V_{CEO}$	55	V
	Collector-base voltage	$V_{CBO}$	30	V
	Emitter-base voltage	$V_{EBO}$	6	V
	Collector current	$I_C$	150	mA
	Collector power dissipation	$P_C$	200	mW
Total power dissipation	$P_{tot}$	200	mW	
Isolation voltage 1 minute	$V_{iso}$	5300	Vrms	
Operating temperature	$T_{opr}$	-30 to +100	$^\circ\text{C}$	
Storage temperature	$T_{stg}$	-55 to +125	$^\circ\text{C}$	
Soldering temperature 10 second	$T_{sol}$	260	$^\circ\text{C}$	

### Electrical Characteristics

( $T_a=25^\circ$ )

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit	
Input	Forward voltage	$V_F$	$I_F=10\text{mA}$	—	1.2	1.4	V
	Peak forward voltage	$V_{FM}$	$I_{FM}=0.5\text{A}$	—	—	3.5	V
	Reverse current	$I_R$	$V_R=4\text{V}$	—	—	10	$\mu\text{A}$
	Terminal capacitance	$C_t$	$V=0$ , $f=1\text{kHz}$	—	30	—	pF
Output	Collector dark current	$I_{CE0}$	$V_{CE}=10\text{V}$ , $I_F=0$	—	—	0.1	$\mu\text{A}$
Transfer characteristics	Current transfer ratio	CTR	$I_F=10/1\text{mA}$ , $V_{CE}=5/1\text{V}$	500/200	—	—	%
	Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_F=50\text{mA}$ , $I_C=50\text{mA}$	—	—	1.0	V
	Isolation resistance	Riso	DC500V	$5 \times 10^{10}$	—	—	ohm
	Floating capacitance	$C_f$	$V=0$ , $f=1\text{MHz}$	—	0.6	1.0	pF
	Cut-off frequency	$f_c$	$V_{CC}=5\text{V}$ , $I_C=2\text{mA}$ , $R_L=100\text{ohm}$	—	7	—	kHz
	Response time (Rise)	$t_r$	$V_{CE}=10\text{V}$ , $I_C=50\text{mA}$ , $R_L=100\text{ohm}$	—	5	40	$\mu\text{s}$
Response time (Fall)	$t_f$	—		60	100	$\mu\text{s}$	

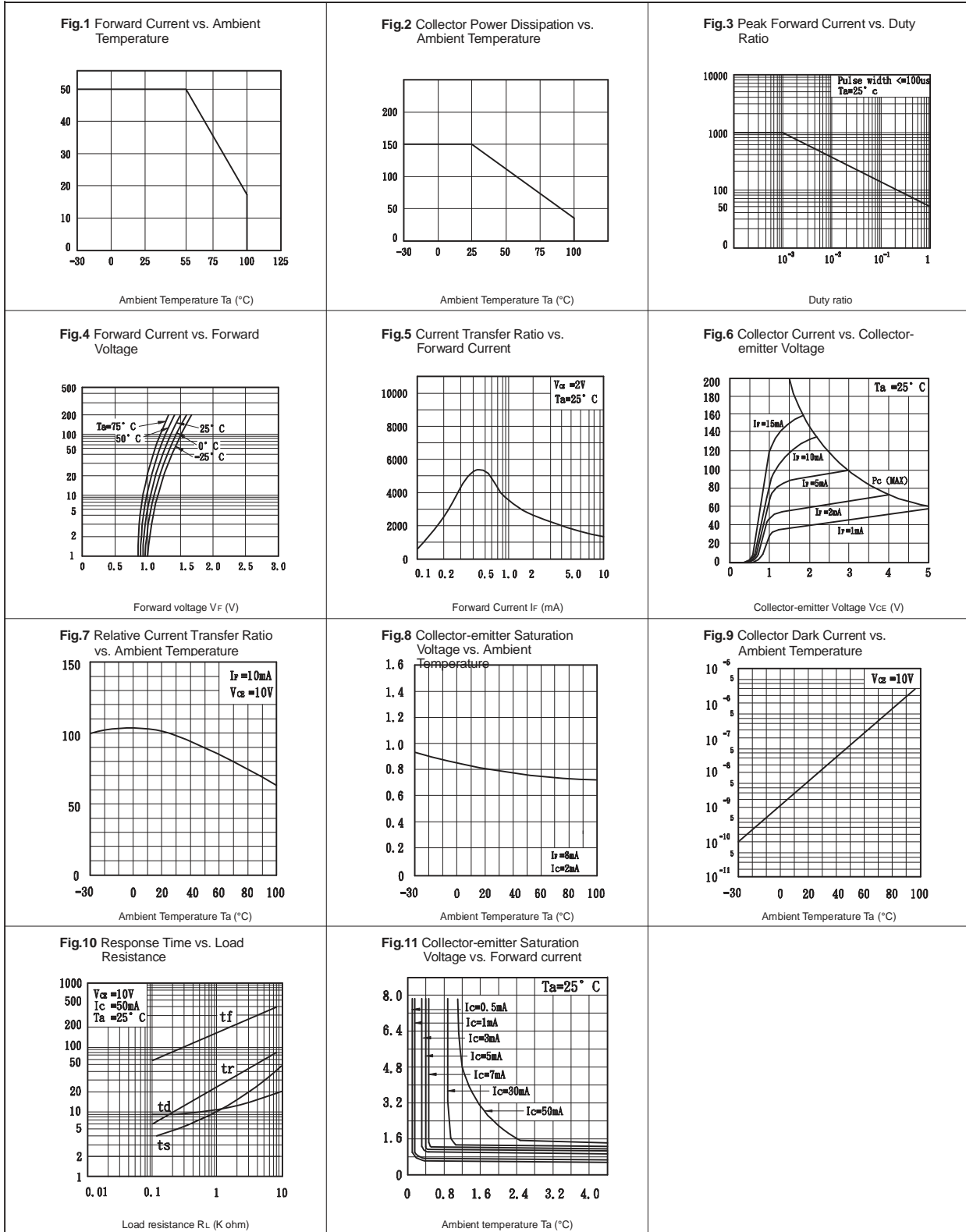


Fig.4 : 6-pin DIP type

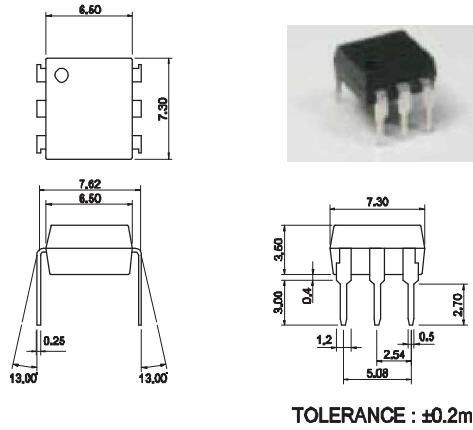


Fig.5 : 6-pin SMD type

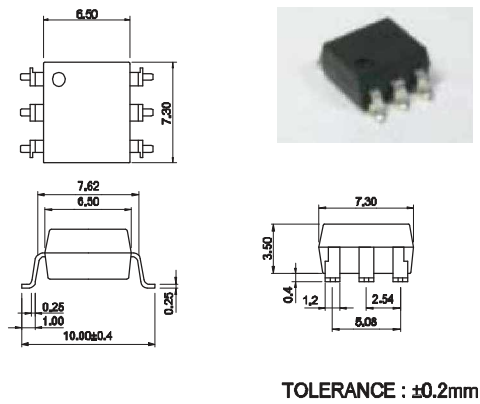


Fig.6 : 6-pin G type

