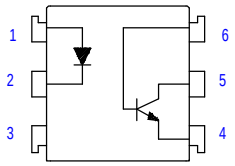
Schematic:



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

Features:

1. Current transfer ratio
   (CTR 100-300% at IF=10mA Vce=10V)

2. High isolation voltage between input and output
   (Viso = 5300Vrms, 7500Vpk).

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:

OPTO611

Absolute Maximum Ratings:

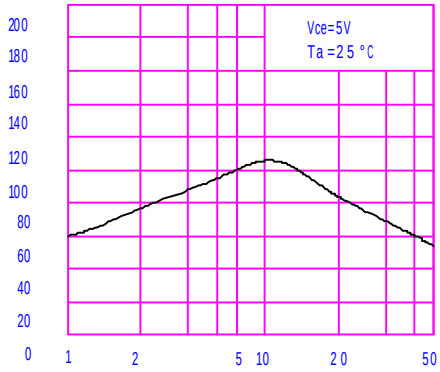
Parameter		Symbol	Rating	Unit
Input	Peak forward current	I_{FM}	1	A
	Reverse voltage	V_R	6	V
	Power dissipation	P_D	70	mW
	Collector-emitter voltage	V_{CEO}	30	V
Output	Emitter-collector voltage	V_{ECO}	6	V
	Collector-base voltage	V_{CBO}	60	V
	Emitter-base voltage	V_{EBO}	6	V
	Collector current	I_C	50	mA
	Collector power dissipation	P_C	150	mW
	Total power dissipation	P_{tot}	200	mW
Isolation voltage 1 minute		V_{iso}	5300	Vrms
		Viso	7500	Vpk
Operating temperature		T_{opr}	-55 to +100	°C
Storage temperature		T_{stg}	-55 to +125	°C
Soldering Temperature 10 seconds		Tsol	260	°C

Electrical Characteristics:

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward voltage	VF	IF=20mA	–	1.2	1.4	V
	Peak forward voltage	VFM	IFM=0.5A	–	–	3.5	V
	Reverse current	IR	VR=4V	–	–	10	uA
	Terminal capacitance	Ct	V=0, f=1kHZ	–	30	–	pF
Output	Collector dark current	ICEO	VCE=20V	–	–	0.1	uA
Tranfer characteristics	Current transfer ratio	CTR	IF=10mA, VCE=5V	100	–	300	%
	Collector-emitter saturation voltage	VCE(sat)	IF=20mA, Ic=2mA	–	–	0.4	V
	Isolation resistance	Riso	DC500V	$5x10^{10}$	10^{11}	–	ohm
	Floating capacitance	Cf	V=0, f=1MHZ	–	0.6	1.0	Pf
	Cut-off frequency	fc	Vcc=5V,Ic=2mA,RL=100ohm	–	80	–	kHz
	Response time (Rise)	tr	Vce=2V,Ic=2mA,RL=100ohm	–	5	20	us
	Response time (Fall)	tf		–	4	20	us

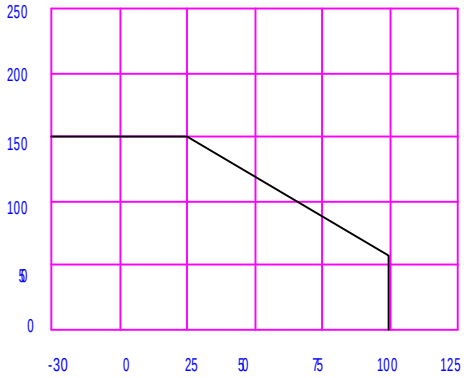
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Fig. 1 Current Transfer Ratio Vs. Forward Current



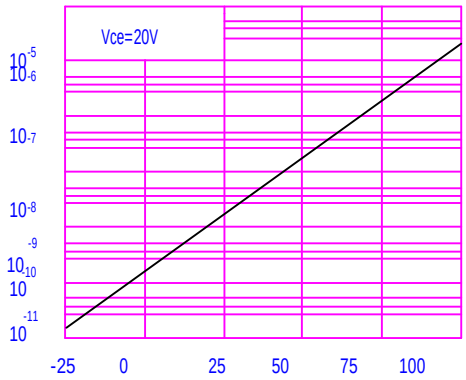
Forward current IF(mA)

Fig.2 Collector Power Dissipation vs. Ambient Temperature



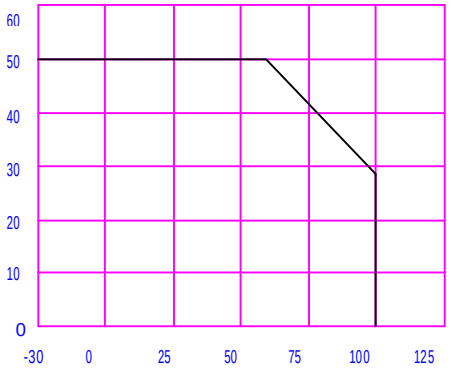
Ambient Temperature Ta(°C)

Fig.3 Collector Dark Current vs. Ambient Temperature



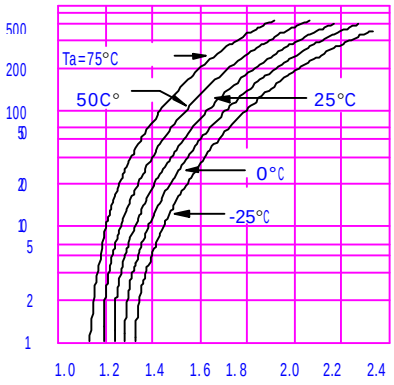
Ambient Temperature Ta(°C)

Fig.4 Forward Current vs. Ambient Temperature



Ambient temperature Ta(°C)

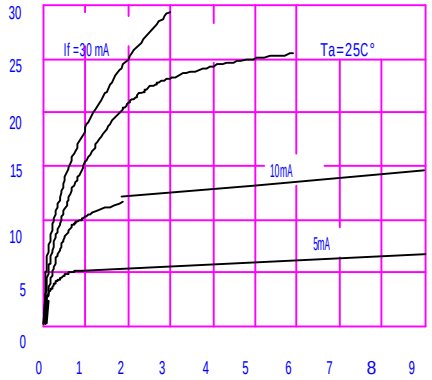
Fig.5 Forward Current vs. Forward Voltage



Forward Voltage VF(V)

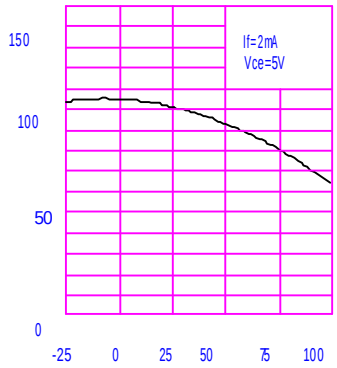
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Fig.6 Collector Current vs. Collector-emitter Voltage



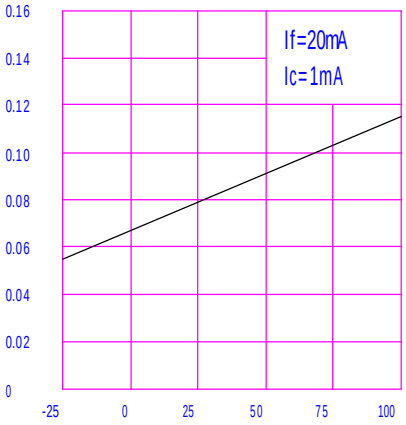
Collector-emitter Voltage V_{CE} (V)

Fig.7 Relative Current Transfer Ratio



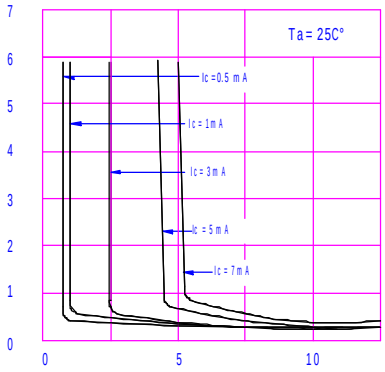
Ambient Temperature Ta(°C)

Fig.8 Collector-emitter Saturation Voltage vs. Ambient Temperature



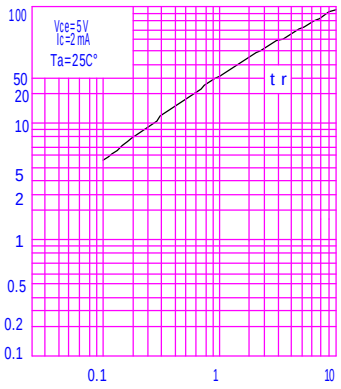
Ambient Temperature Ta(°C)

Fig.9 Collector-emitter Saturation Voltage vs. Forward Current



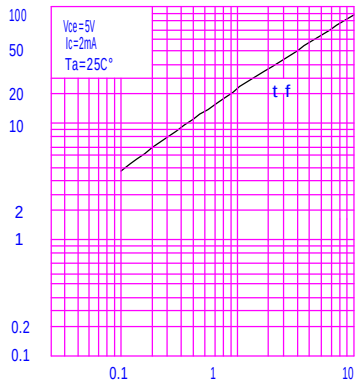
Forward Current I_F(mA)

Fig.10 Response Time vs. Load Resistance



Load Resistance RL(Kohm)

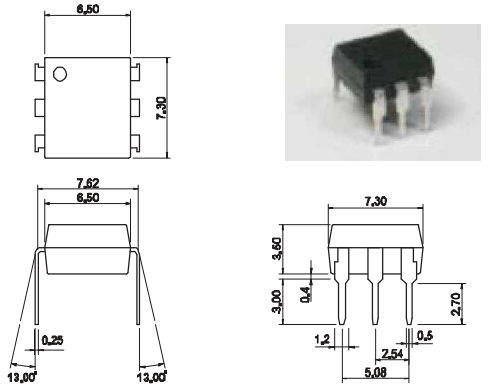
Fig.11 Response Time vs. Load Resistance



Load Resistance RL(Kohm)

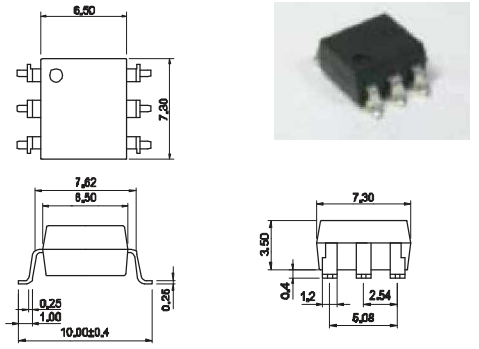
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Fig.4 : 6-pin DIP type



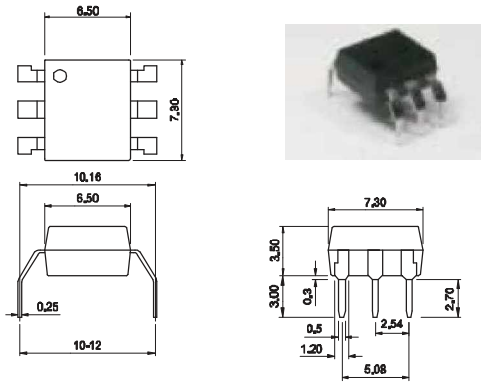
TOLERANCE : ±0.2mm

Fig.5 : 6-pin SMD type



TOLERANCE : ±0.2mm

Fig.6 : 6-pin G type

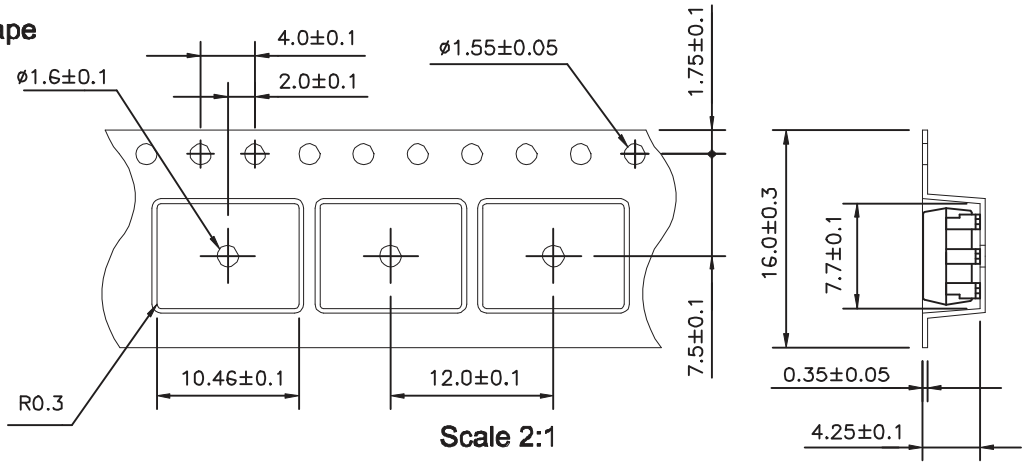


TOLERANCE : ±0.2mm

6-pin SMD Carrier Tape & Reel

Unit:mm

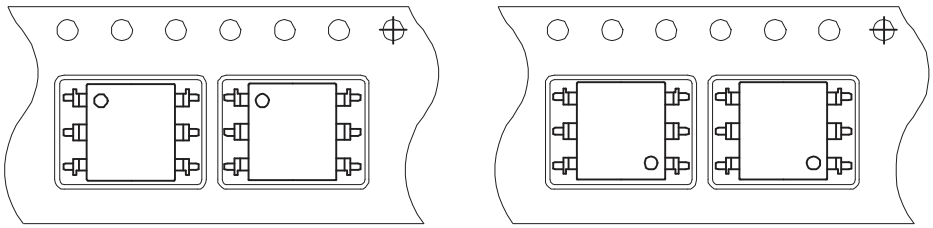
Tape



Scale 2:1

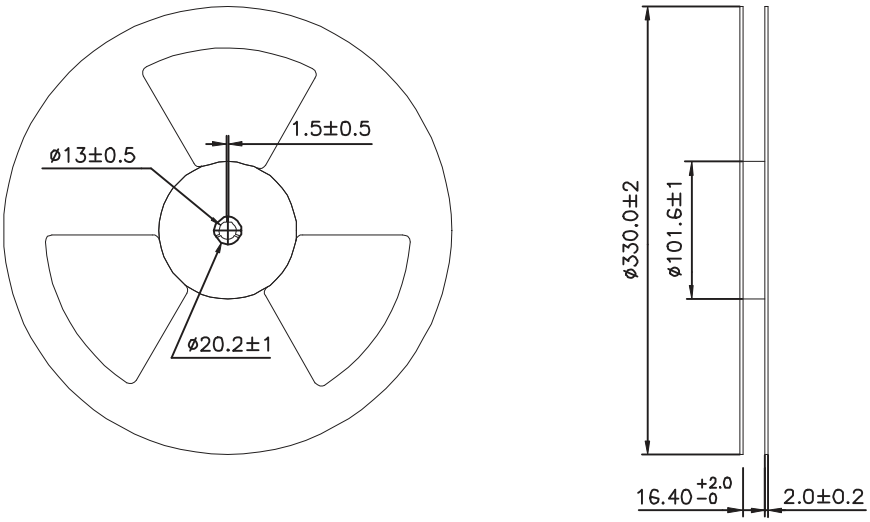
Material : PS

Direction



TL TR

Reel



Scale 1:5

Material : PVC

Packing:1000pcs/reel

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