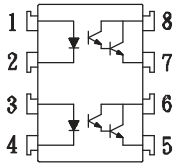


Schematic:



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

Features:

1. High current transfer ratio
(CTR:MIN.600% at $I_r=1\text{mA}$, $V_{ce}=2\text{V}$)
2. High isolation voltage between input and output
(Viso:5300Vrms).
3. Compact dual-in-line package.

Ordering:

Suffix to Standard Part Number

- V = VDE Compliant
- G = 10mm Lead Spread
- S = Surface Mount Lead-form
- T = Tape & Reel
- ISP825
- PC825
- PS2502-2

Equivalents:

This part equals/exceeds all specifications of:

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}	40 V
	Emitter-collector voltage		6 V
	Collector current	I_C	80 mA
	Collector power dissipation	P_C	150 mW
Total power dissipation	P_{tot}	200 mW	
Isolation voltage 1 minute	Viso	5300	Vrms
Operating temperature	T_{opr}	-55 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:

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

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit	
Input	Forward voltage	V_F	$I_F=20\text{mA}$	—	1.2	1.4 V	
	Peak forward voltage	V_{FM}	$I_{FM}=0.5\text{A}$	—	—	3.0 V	
	Reverse current	I_R	$V_R=4\text{V}$	—	—	10 μA	
	Terminal capacitance	C_t	$V=0, f=1\text{kHz}$	—	30	250 pF	
Output	Collector dark current	I_{CEO}	$V_{CE}=10\text{V}, I_F=0$	—	—	1.0 μA	
Transfer characteristics	Current transfer ratio	CTR	$I_F=1\text{mA}, V_{CE}=2\text{V}$	600	—	7500 %	
	Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_F=20\text{mA}, I_C=5\text{mA}$	—	0.8	1.0 V	
	Isolation resistance	Riso	DC500V, 40 to 60% RH	5×10^{10}			ohm
	Floating capacitance	C_f	$V=0, f=1\text{MHz}$	—	0.6	1.0 pF	
	Cut-off frequency	f_c	$V_{CC}=2\text{V}, I_C=20\text{mA}, R_L=100\text{ohm}$	1	6	— kHz	
	Response time (Rise)	t_r	$V_{CE}=2\text{V}, I_C=20\text{mA}, R_L=100\text{ohm}$	—	80	300	μs
Response time (Fall)	t_f	—		72	250	μs	

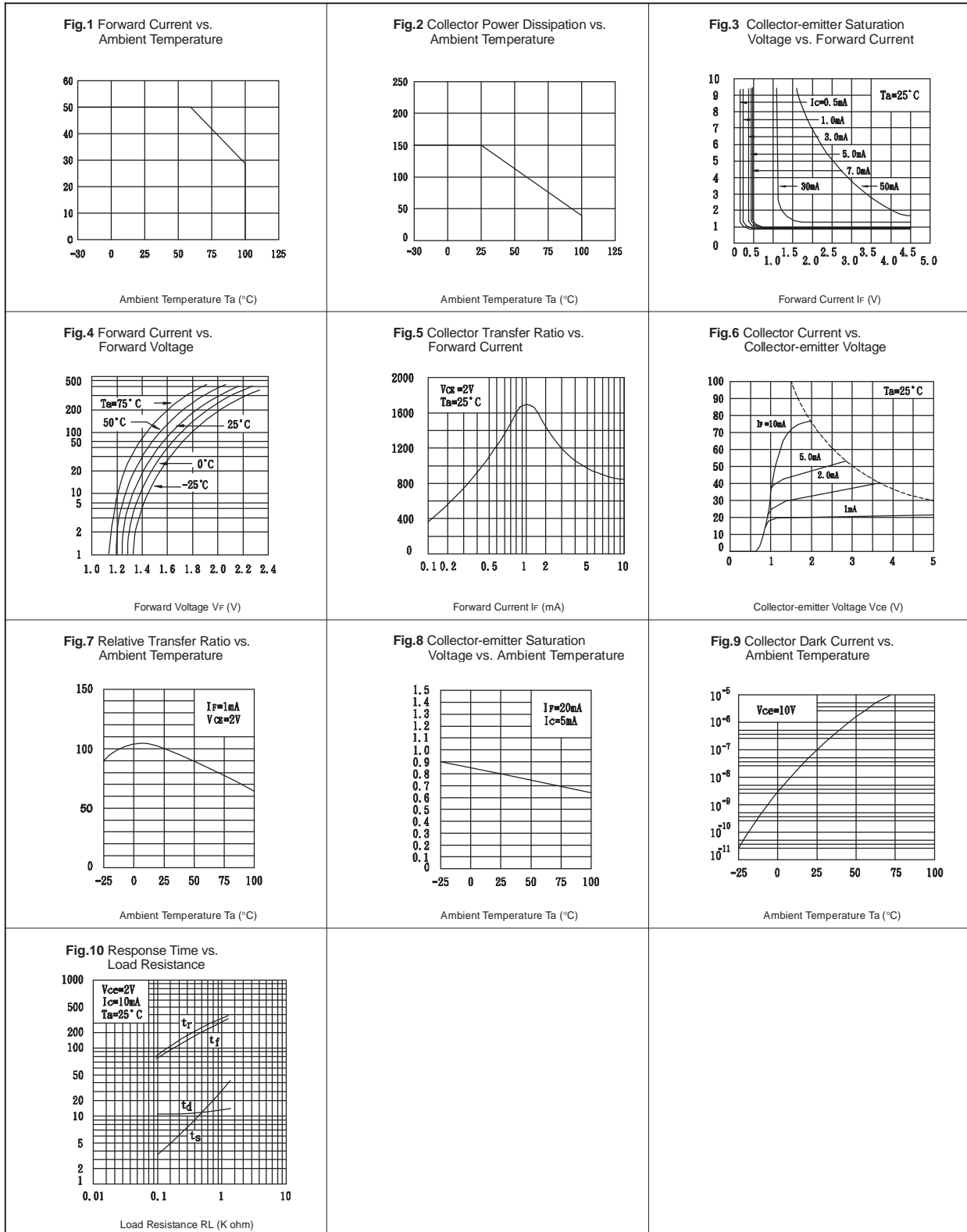


Fig.7 : 8-pin DIP type

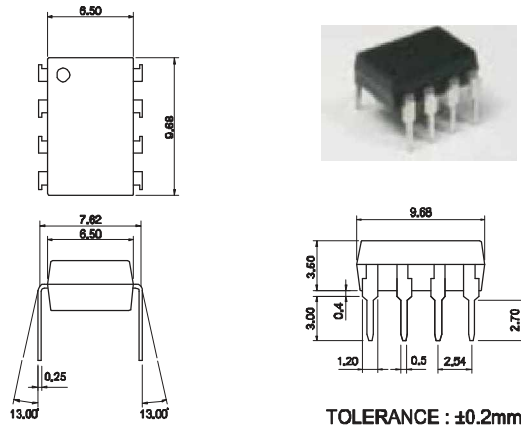


Fig.8 : 8-pin SMD type

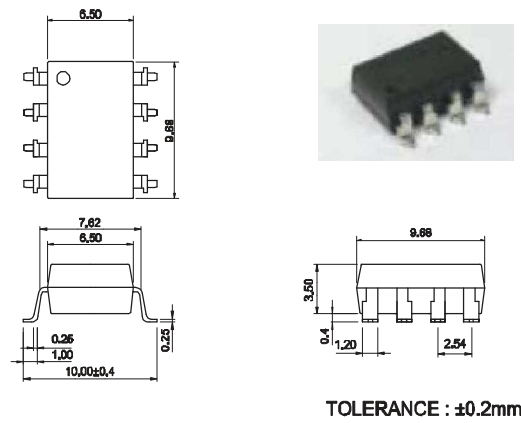


Fig.9 : 8-pin^G type

