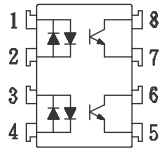


### Schematic:



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

### Features:

1. Current transfer ratio (CTR:MIN.60% at  $I_F=1\text{mA}$   $V_{ce}=5\text{V}$ )
2. High isolation voltage between input and output (Viso:5300Vrms).
3. Compact dual-in-line package.
4. Ac input.

### Ordering:

Suffix to Standard Part Number

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

### Equivalents:

This part equals/exceeds all specifications of:

- ISP824, 620-2
- PC824
- PS2505-2
- TLP620-2

### Absolute Maximum Ratings:

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

	Parameter	Symbol	Rating	Unit
Input	Forward current	$I_F$	$\pm 50$	mA
	Peak forward current	$I_{FM}$	$\pm 1$	A
	Power dissipation	Pd	70	mW
Output	Collector-emitter voltage	$V_{CEO}$	80	V
	Emitter-collector voltage	$V_{ECO}$		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		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	$V_F$	$I_F = \pm 20\text{mA}$	—	1.2	1.4	V
	Peak forward voltage	$V_{FM}$	$I_{FM} = \pm 0.5\text{A}$	—	—	3.5	V
	Terminal capacitance	$C_t$	$V=0, f=1\text{kHz}$	—	30	—	pF
Output	Collector dark current	$I_{CEO}$	$V_{CE} = 20\text{V}, I_F = 0$	—	—	0.1	$\mu\text{A}$
Transfer characteristics	Current transfer ratio	CTR	$I_F = \pm 1\text{mA}, V_{CE} = 5\text{V}$	60	—	600	%
	Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_F = \pm 20\text{mA}, I_C = 1\text{mA}$	—	0.1	0.3	V
	Isolation resistance	Riso	DC500V	$5 \times 10^{10}$	$10^{11}$	—	ohm
	Floating capacitance	$C_f$	$V=0, f=1\text{MHz}$	—	0.6	1.0	pF
	Cut-off frequency	$f_c$	$V_{CC} = 5\text{V}, I_C = 2\text{mA}, R_L = 100\text{ohm}$	—	80	—	kHz
	Response time (Rise)		$V_{CE} = 2\text{V}, I_C = 2\text{mA}, R_L = 100\text{ohm}$	—	5	20	$\mu\text{s}$
	Response time (Fall)	$t_f$		—	4	20	$\mu\text{s}$

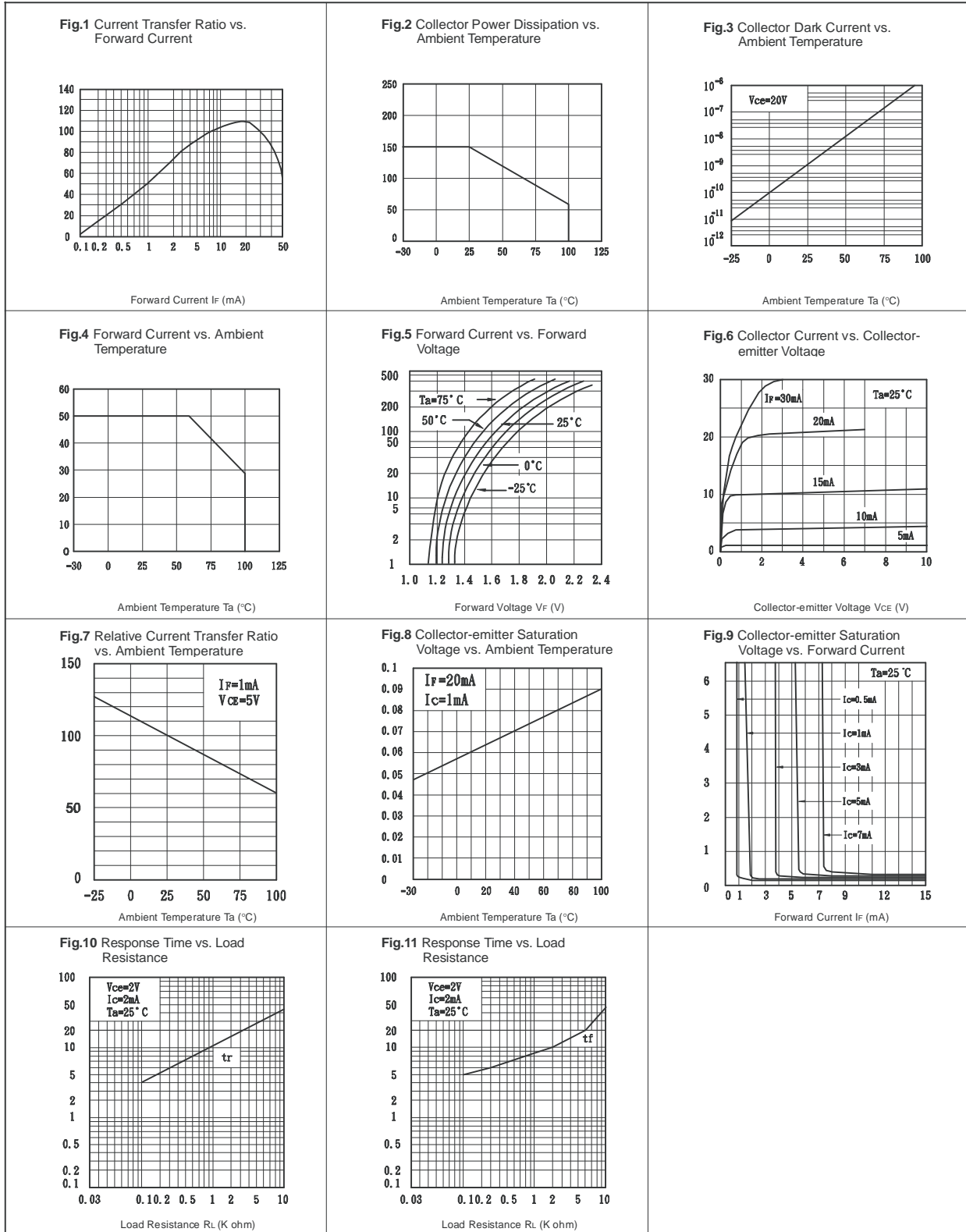


Fig.7 : 8-pin DIP type

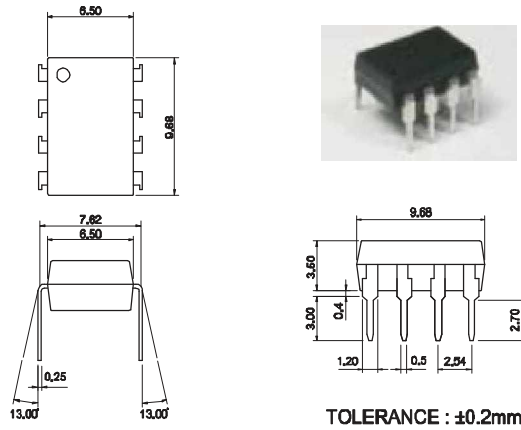


Fig.8 : 8-pin SMD type

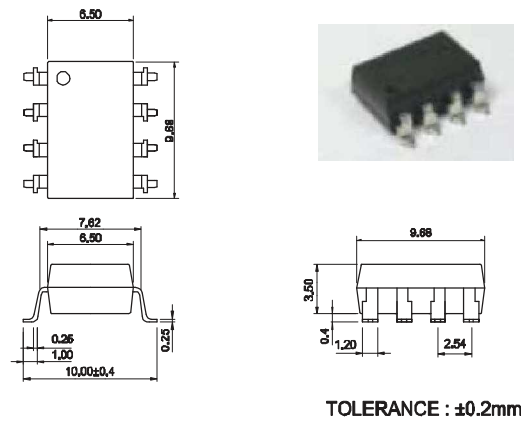


Fig.9 : 8-pin<sup>G</sup> type

