

TOSHIBA PHOTOCOUPLER

TLP721(D4)SERIESATTACHMENT : SPECIFICATIONS FOR VDE0884 OPTION : (D4)

Types : TLP721, TLP721F

Type designations for 'Option : (D4)', which are tested under VDE0884 requirements.

Ex. : TLP721 (D4-GR-LF4) D4 : VDE0884 option
 GR : CTR rank
 LF4 : lead bend

Note : Use Toshiba standard type number for safety standard application.

Ex. TLP721 (D4-GR-LF4) → TLP721

VDE0884 ISOLATION CHARACTERISTICS

DESCRIPTION		SYMBOL	RATING	UNIT
Application Classification (DIN VDE0110 Teil 1 / 01.89, Table 1) for rated mains voltage $\leq 300V_{rms}$ for rated mains voltage $\leq 600V_{rms}$			I-IV I-III	—
Climatic Classification (DIN IEC68 Teil 1 / 09.80)			40 / 100 / 21	—
Pollution Degree (DIN VDE0110 Teil 1 / 01.89)			2	—
Maximum Operating Insulation Voltage	TLP721	V_{IORM}	630	V_{pk}
	TLP721F		890	
Input to output Test Voltage, Method A $V_{pr} = 1.5 \times V_{IORM}$, Type and Sample Test $t_p = 60s$, Partial Discharge $< 5pC$	TLP721	V_{pr}	945	V_{pk}
	TLP721F		1335	
Input to output Test Voltage, Method B $V_{pr} = 1.875 \times V_{IORM}$, 100% Production Test $t_p = 1s$, Partial Discharge $< 5pC$	TLP721	V_{pr}	1180	V_{pk}
	TLP721F		1670	
Highest Permissible Overvoltage (Transient Overvoltage, $t_{pr} = 10s$)		V_{TR}	6000	V_{pk}
Safety Limiting Values (Max. permissible ratings in case of fault, also refer to thermal derating curve) Current (Input current I_F , $P_{si} = 0$) Power (Output or Total Power Dissipation) Temperature		I_{si} P_{si} T_{si}	300 500 150	mA mW °C
Insulation Resistance, $V_{IO} = 500V$, $T_a = 25^\circ C$ $V_{IO} = 500V$, $T_a = T_{si}$		R_{si}	$\geq 10^{12}$ $\geq 10^9$	Ω

- This data sheet refers to TLP721 (D4, M), TLP721F (D4, M) that previously has a white-resin mold and have been changed. When designing new products please use black mold-resin devices.

INSULATION RELATED SPECIFICATIONS

		 7.62mm pitch TLP721		 10.16mm pitch TLP721F	
Minimum Creepage Distance	(*)	Cr	7.0mm	8.0mm	
Minimum Clearance	(*)	Cl	7.0mm	8.0mm	
Minimum Insulation Thickness		ti	0.5mm		
Comperative Tracking Index (DIN IEC112/VDE0303, Part 1)		CTI	175 (VDE0110 Teil 1/01.89 Group IIIa)		

((*) in accordance with DIN VDE0110 Teil 1/01.89, Table 2, & 4)

(*1) If a printed circuit is incorporated, the creepage distance and clearance may be reduced below this value (e. g. at a standard distance between soldering eye centres of 7.5mm). If this is not permissible, the user shall take suitable measures.

(*2) This photocoupler is suitable for 'safe electrical isolation' only within the safety limit data.

Maintenance of the safety data shall be ensured by means of protective circuits.

VDE Test sign : Marking on product
for VDE0884

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Marking on packing
for VDE0884



0884

Marking Example :

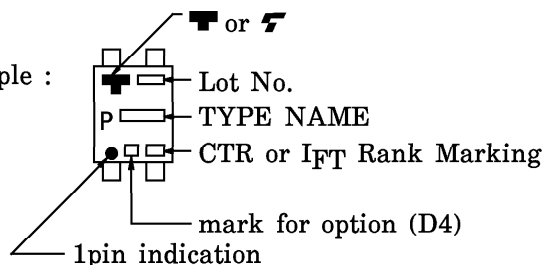


Figure 1 Partial discharge measurement procedure according to VDE0884
Destructive test for qualification and sampling tests.

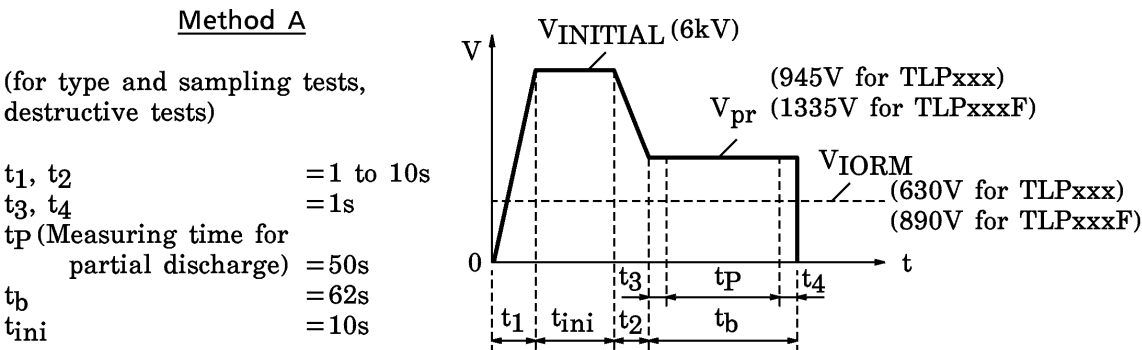


Figure 2 Partial discharge measurement procedure according to VDE0884
Non-destructive test for 100% inspection.

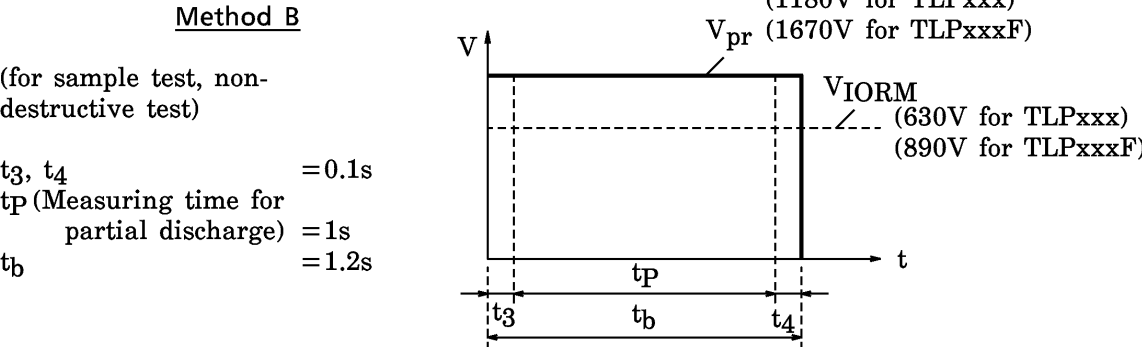
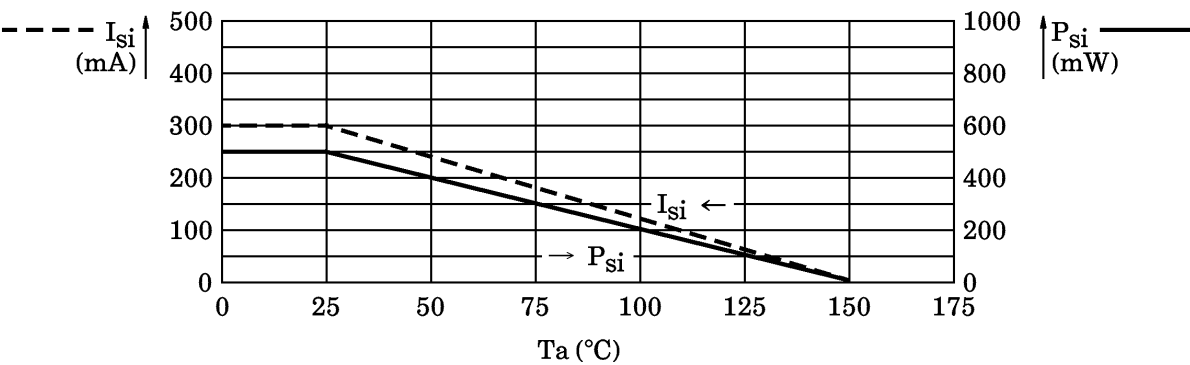


Figure 3 Dependency of maximum safety ratings on ambient temperature



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000707EBC

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