

TOSHIBA PHOTOCOUPLER

TLP731(D4)SERIES , TLP741(D4)SERIESATTACHMENT : SPECIFICATIONS FOR VDE0884 OPTION : (D4)

Types : TLP731, TLP732, TLP741G, TLP741J

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

Ex. : TLP732 (D4-GR-LF2) D4 : VDE0884 option
 GR : CTR rank
 LF2 : lead bend

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

Ex. TLP732 (D4-GR-LF2) → TLP732

VDE0884 ISOLATION CHARACTERISTICS

DESCRIPTION	SYMBOL	RATING	UNIT
Application Classification (DIN VDE0109 / 12.83, 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)		55 / 100 / 21	—
Pollution Degree (DIN VDE0109 / 12.83)		2	—
Maximum Operating Insulation Voltage	V_{IORM}	630	V _{pk}
Input to output Test Voltage, Method A $V_{pr} = 1.2 \times V_{IORM}$, Type and Sample Test $t_p = 60s$, Partial Discharge $< 5pC$	V_{pr}	760	V _{pk}
Input to output Test Voltage, Method B $V_{pr} = 1.6 \times V_{IORM}$, 100% Production Test $t_p = 1s$, Partial Discharge $< 5pC$	V_{pr}	1000	V _{pk}
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 , $P_{Si} = 0$)	I_{Si}	400	mA
Power (Output or Total Power Dissipation)	P_{Si}	700	mW
Temperature	T_{Si}	150	°C
Insulation Resistance at T_{Si} , $V_{IO} = 500V$	R_{Si}	$\geq 10^9$	Ω

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INSULATION RELATED SPECIFICATIONS

			 7.62mm pitch standard type	 10.16mm pitch (LF2) type
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 (VDE0109 / 12.83 Group III a)	

((*) in accordance with DIN VDE0109 / 12.83, 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



Marking on packing
for VDE0884



0884

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

Method A

(for type and sampling tests,
destructive tests)

t_1, t_2 = 1 to 10s
 t_3, t_4 = 1s
 t_p (Measuring time for
 partial discharge) = 50s
 t_b = 62s
 t_{ini} = 10s

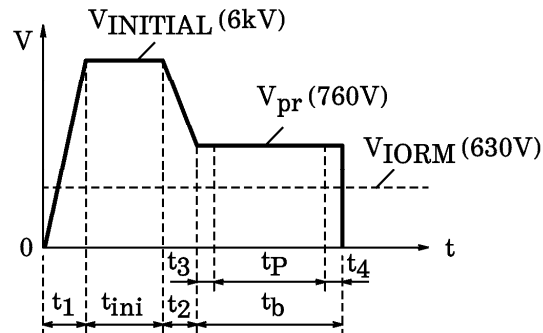


Figure 2 Partial discharge measurement procedure according to VDE0884
Non-destructive test for 100% inspection.

Method B

(for sample test, non-
destructive test)

t_3, t_4 = 0.1s
 t_p (Measuring time for
 partial discharge) = 1s
 t_b = 1.2s

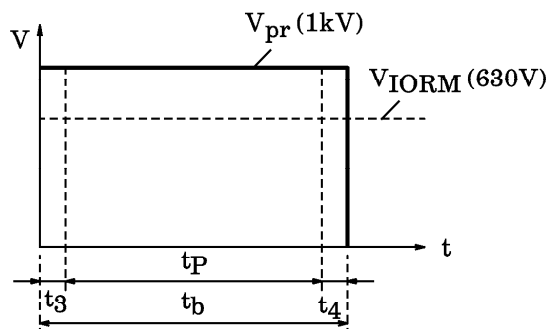


Figure 3 Dependency of maximum safety ratings on ambient temperature

