TOSHIBA PHOTOCOUPLER

TLP721(D4,M)SERIES,TLP733(D4,M)SERIES,TLP747(D4,M)SERIES

ATTACHMENT : SPECIFICATIONS FOR VDE0884 OPTION: (D4)

Types : TLP721, TLP721F, TLP733, TLP733F, TLP734, TLP734F, TLP747G, TLP747GF, TLP747J,

TLP747JF

This data sheet refers to black mold-resin devices, TLPxxx (D4xxx, M) that previously has a white-resin mold and have been changed. When designing new products please use black mold-resin devices.

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

Ex. : TLP734F (D4-GR-LF4, M) D4 : VDE0884 option

GR : CTR rank name

LF4: standard lead bend name
M: black mold-resin devices

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

Ex. TLP734(FD4-GR-LF4, M) \rightarrow TLP734F

VDE0884 ISOLATION CHARACTERISTICS

DESCRIPTION			RATING	UNIT
Application Classification (DIN VDE0110 Teil 2 / 01.89, Table 1) for rated mains voltage ≤ 300 V _{RMS} for rated mains voltage ≤ 600 V _{RMS}			I- IV I- III	_
Climatic Classification (DIN IEC68 Teil 1 / 09.80)		40 / 100 / 21	-	
Pollution Degree (DIN VDE0110 Teil 2 / 01.89)			2	_
Maximum Operating Insulation Voltage	TLPxxx type		890	- Vpk
	TLPxxxF type	V _{IORM}	1130	
Input to output Test Voltage, Method A Vpr = 1.5 × V _{IORM} , Type and Sample Test tp = 60s, Partial Discharge < 5pC	TLPxxx type		1335	- Vpk
	TLPxxxF type	Vpr	1695	
Input to output Test Voltage, Method B Vpr = 1.875 × V _{IORM} , 100% Production Test tp = 1s, Partial Discharge < 5pC	TLPxxx type		1670	- Vpk
	TLPxxxF type	Vpr	2120	
Highest Permissible Overvoltage (Transient Overvoltage, tp.	V _{TR}	8000	Vpk	
Safety Limiting Values (Max. permissible ratings in case of fault, also refer to thermal derating curve) Current (Input current I _F , Psi = 0) Power (Output or Total Powr Dissipation) Temperature		er to Isi Psi Tsi	400 700 150	mA mW °C
Insulation Resistance, V_{IO} = 500V, Ta = 25°C V_{IO} = 500V, Ta = Tsi		Rsi	≥10 ¹² ≥10 ⁹	Ω

INSULATION RELATED SPECIFICATIONS

		7.62mm pitch TLPxxx type	10.16mm pitch TLPxxxF type
Minimum Creepage Distance (*)	Cr	7.0 mm	8.0 mm
Minimun Clearance (*)	CI	7.0 mm	8.0 mm
Minimum Insulation Thickness	ti	0.5 mm	
Comperative Tracking Index (DIN IEC112 / VDE0303, Part 1)	СТІ	175 (VDE0110 Teil 2 / 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.

TLP721 SERIES

TLP733 SERIES TLP747 SERIES

VDE Test sign: Marking on product

for VDE0884

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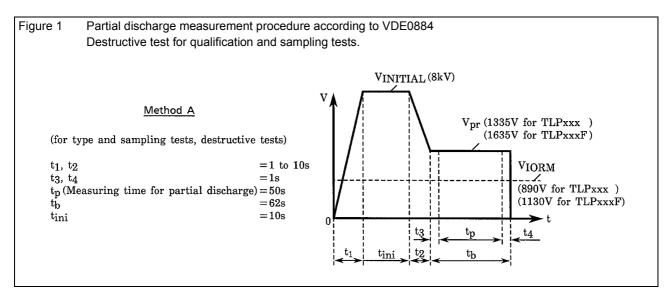
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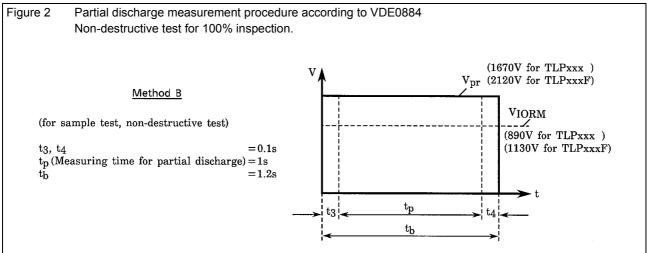
Marking on packing for VDE0884

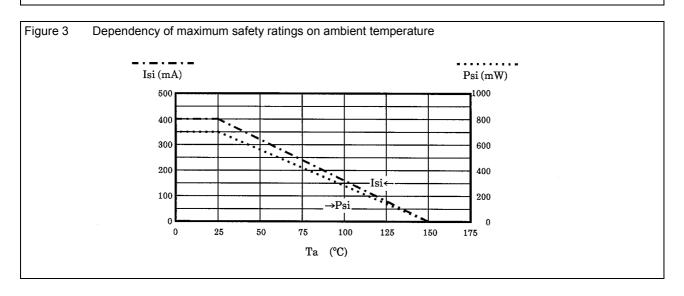


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RESTRICTIONS ON PRODUCT USE

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- TOSHIBA is continually working to improve the quality and reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to comply with the standards of safety in making a safe design for the entire system, and to avoid situations in which a malfunction or failure of such TOSHIBA products could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent TOSHIBA products specifications. Also, please keep in mind the precautions and conditions set forth in the "Handling Guide for Semiconductor Devices," or "TOSHIBA Semiconductor Reliability Handbook" etc..
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