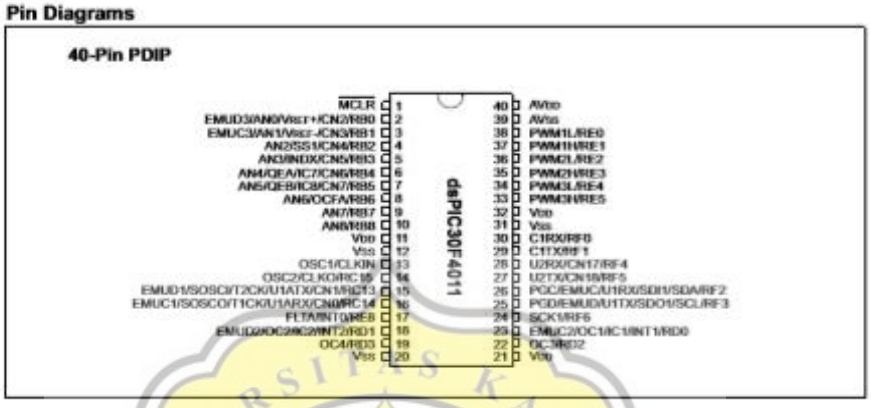
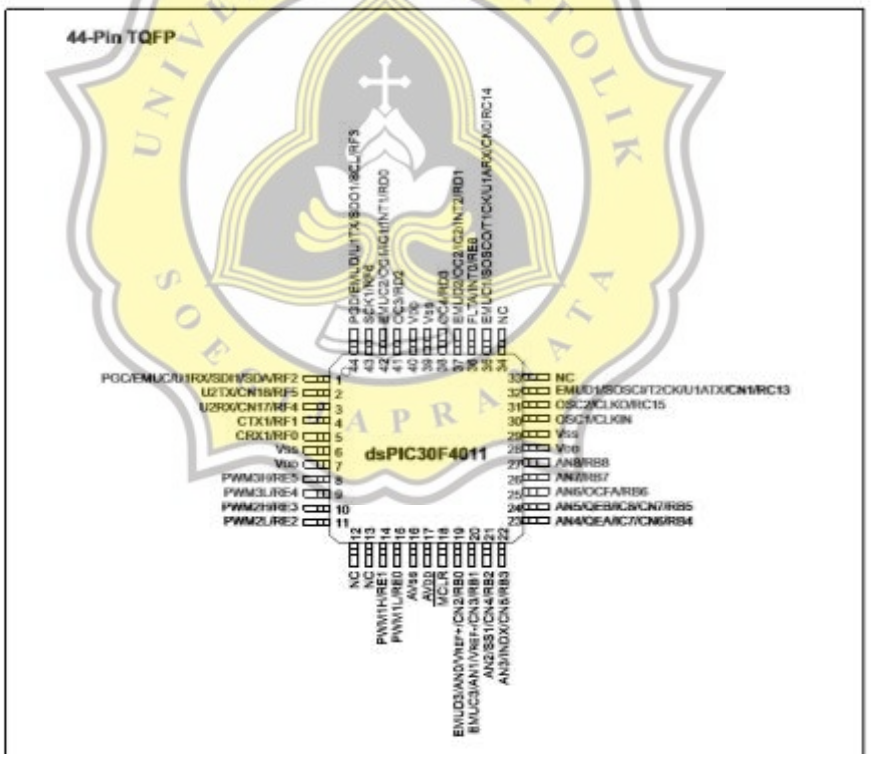
LAMPIRAN

Pin Diagrams

40-Pin PDIP



44-Pin TQFP



LEM

Current Transducer LA 55-P/SP1

I_{PN} = 50 A

For the electronic measurement of currents: DC, AC, pulsed..., with galvanic isolation between the primary circuit (high power) and the secondary circuit (electronic circuit).

Electrical data

I_{PN}	Primary nominal current rms					50		A
I_{PM}	Primary current, measuring range					0 .. ± 100		A
R_M	Measuring resistance			T_A = 70°C		T_A = 85°C		
				$R_{M\,min}$	$R_{M\,max}$	$R_{M\,min}$	$R_{M\,max}$	
	with ± 12 V	@ ± 50 A_{max}		0	215	0	210	Ω
		@ ± 100 A_{max}		0	95	0	90	Ω
	with ± 15 V	@ ± 50 A_{max}		0	335	30	330	Ω
		@ ± 100 A_{max}		0	95	30	90	Ω
I_{SN}	Secondary nominal current rms					25		mA
K_N	Conversion ratio					1 : 2000		
V_C	Supply voltage (± 5 %)					± 12 .. 15		V
I_C	Current consumption					10 (@ ± 15 V) + I_S		mA

Accuracy - Dynamic performance data

X	Accuracy @ I_{PN}, T_A = 25°C	@ ± 15 V (± 5 %)		± 0.65	%
		@ ± 12 .. 15 V (± 5 %)		± 0.90	%
ε_L	Linearity error			< 0.15	%
			Typ	Max	
I_O	Offset current @ I_P = 0, T_A = 25°C			± 0.10	mA
I_{OM}	Magnetic offset current [1] @ I_P = 0 and specified R_M, after an overload of 3 x I_{PN}			± 0.15	mA
I_{OT}	Temperature variation of I_O	- 25°C .. + 85°C	± 0.05	± 0.30	mA
		- 40°C .. + 25°C	± 0.10	± 0.50	mA
t_{ra}	Reaction time to 10 % of I_{PN} step		< 500		ns
t_r	Response time [2] to 90 % of I_{PN} step		< 1		µs
dI/dt	dI/dt accurately followed		> 200		A/µs
BW	Frequency bandwidth (- 1 dB)		DC .. 200		kHz

General data

T_A	Ambient operating temperature		- 40 .. + 85	°C
T_S	Ambient storage temperature		- 40 .. + 90	°C
R_S	Secondary coil resistance	@ T_A = 70°C	145	Ω
		@ T_A = 85°C	150	Ω
m	Mass		18	g
	Standards		EN 50178: 1997	

Notes: [1] Result of the coercive field of the magnetic circuit
[2] With a dI/dt of 100 A/µs.

Features

- Closed loop (compensated) current transducer using the Hall effect
- Printed circuit board mounting
- Insulated plastic case recognized according to UL 94-V0.

Special features

- I_{PN} = 0 .. ± 100 A
- K_N = 1 : 2000.

Advantages

- Excellent accuracy
- Very good linearity
- Low temperature drift
- Optimized response time
- Wide frequency bandwidth
- No insertion losses
- High immunity to external interference
- Current overload capability.

Applications

- AC variable speed drives and servo motor drives
- Static converters for DC motor drives
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Power supplies for welding applications.

Application domain

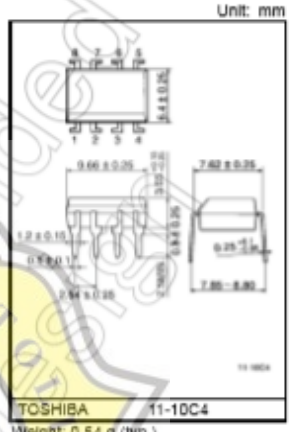
- Industrial.

TOSHIBA Photocoupler GaAℓAs Ired & Photo-IC

TLP250

Industrial Inverter
Inverter For Air Conditioner
IGBT Gate Drive
Power MOS FET Gate Drive

Unit: mm



TOSHIBA 11-10C4
Weight: 0.54 g (typ.)

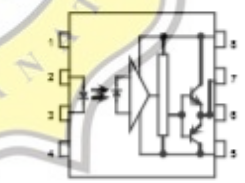
The TOSHIBA TLP250 consists of a GaAlAs light emitting diode and a integrated photodetector.
This unit is 8-lead DIP package.
TLP250 is suitable for gate driving circuit of IGBT or power MOS FET.

- Input threshold current: 5mA(max)
- Supply current : 11mA(max)
- Supply voltage : 10-35V
- Output current : ±1.5A (max)
- Switching time t_{pLH}/t_{pHL}: 0.5μs(max)
- Isolation voltage: 2500V_{rms}(min)
- UL recognized: UL1577, file No.E67349
- c-UL approved : CSA Component Acceptance Service No. 5A, File No.E67349
- Option(D4)
  VDE Approved : EN60747-5- 5
  Note: When a EN60747-5-5 approved type is needed, Please designate "Option(D4)"

Truth Table

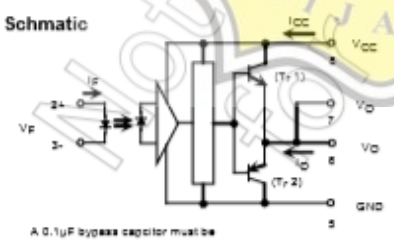
		Tr1	Tr2
Input LED	On	On	Off
	Off	Off	On

Pin Configuration (top view)



1 : N.C.
2 : Anode
3 : Cathode
4 : N.C.
5 : GND
6 : V_O (Output)
7 : V_O
8 : V_{CC}

Schmatic



A 0.1μF bypass capcitor must be connected between pin 8 and 5

MORNSUN
Industrial DC&AC converter professional

A_S-2W & B_S-2W Series

2W, FIXED INPUT, ISOLATED & UNREGULATED DUAL/SINGLE OUTPUT DC-DC CONVERTER

RoHS CE cULus

FEATURES

High Efficiency up to 86%
1KVDC Isolation
SIP Package
Internal SMD Construction
Temperature Range: -40°C to +85°C
No Heat sink Required
No External Component Required
Industry Standard Pinout
RoHS Compliance

APPLICATIONS

The A_S-2W & B_S-2W Series are specially designed for applications where a group of polar power supplies are isolated from the input power supply in a distributed power supply system on a circuit board.

These products apply to:

1) Where the voltage of the input power supply is fixed (voltage variation ≤ ±10%);
2) Where isolation is necessary between input and output (isolation voltage ≤1000VDC);
3) Where the regulation of the output voltage and the output ripple noise are not demanding.

Such as: purely digital circuits, ordinary low frequency analog circuits, and IGBT power device driving circuits.

MODEL SELECTION

A0505S-2W

- Rated Power
- Package Style
- Output Voltage
- Input Voltage
- Product Series

PRODUCT PROGRAM

Part Number	Input Voltage (VDC) Nominal	Input Voltage (VDC) Range	Output Voltage (VDC)	Output Current (mA) Max	Output Current (mA) Min	Efficiency (%, Typ)	UL CE
B0303S-2W	3.3	2.97-3.63	3.3	400	40	73	
A0505S-2W	5	4.5-5.5	±5	±200	±20	82	UL
A0509S-2W			±9	±111	±12	85	UL
A0512S-2W			±12	±83	±9	86	UL
A0515S-2W			±15	±67	±7	82	UL
A0524S-2W			±24	±42	±5	82	
B0503S-2W			3.3	400	40	74	
B0505S-2W			5	400	40	81	UL CE
B0509S-2W			9	222	23	84	UL CE
B0512S-2W			12	167	17	83	UL CE
B0515S-2W			15	133	14	84	UL CE
A1205S-2W	12	10.8-13.2	±5	±200	±20	81	UL
A1209S-2W			±9	±111	±12	84	UL
A1212S-2W			±12	±83	±9	86	UL
A1215S-2W			±15	±67	±7	82	UL
B1205S-2W			5	400	40	81	UL CE
B1209S-2W			9	222	23	82	UL CE
B1212S-2W			12	167	17	85	UL CE
B1215S-2W			15	133	14	82	UL CE
A1505S-2W	15	13.5-16.5	±5	±200	±20	80	
B1505S-2W			5	400	40	80	
A2405S-2W	24	21.6-26.4	±5	±200	±20	80	UL
A2409S-2W			±9	±111	±12	84	UL
A2412S-2W			±12	±83	±9	84	UL
A2415S-2W			±15	±67	±7	84	UL
A2424S-2W			±24	±42	±5	85	
B2405S-2W			5	400	40	80	UL CE
B2409S-2W			9	222	23	83	UL CE
B2412S-2W			12	167	17	84	UL CE
B2415S-2W			15	133	14	84	UL CE
B2424S-2W			24	84	10	84	

Note: The A_S-1W/B_LS-1W series also are available in our company.

COMMON SPECIFICATIONS

Item	Test conditions	Min	Typ	Max	Units
Operating Temp. Range		-40		85	°C
Storage Temp. Range		-55		125	
Storage humidity range				95	%
Cooling		Free air convection			
Temp. rise at full load			15	25	°C
Lead temperature	1.5mm from case for 10 seconds			300	
Short circuit protection*				1	s
Case material		Plastic (UL94-V0)			
MTBF		3500			K hours
Weight			2.8		g

*Supply voltage must be discontinued at the end of short circuit duration.

MORNSUN Science& Technology co. Ltd.
Address: 2th floor 6th building, Hangzhou Industrial District, Guangzhou, China
Tel: 86-20-38601850
Fax: 86-20-38601272
http://www.mornsun-power.com