



THE DATASHEET OF AB30S

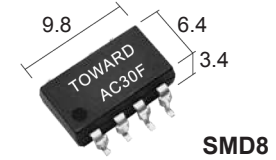
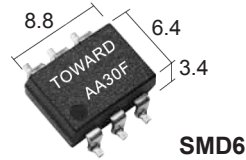
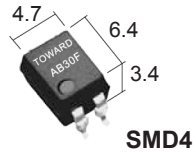
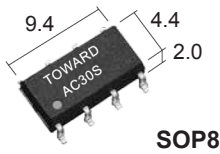
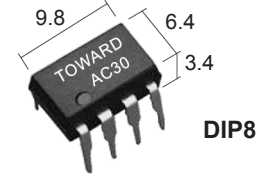
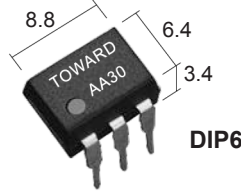
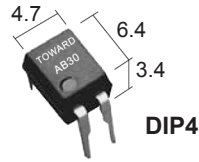
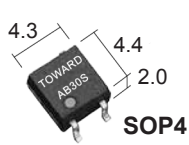


Part Number: 30 Series

General Purpose - 1 Form A / 2 Form A - PhotoDMOS Relays Product Data Sheet

400 VOLTS

PICTURE



Drawings not to scale. All dimensions in mm nominal. Pitch: 2.54 mm

✓RoHS Compliant

ORDERING INFORMATION

FEATURES

| Body Style | Series | Options |
|--|--------|--|
| AB = 4 pin AA = 6 pin AC = 8 pin | 30 | F = SMD S = SOP R1 = Tape & Reel (SMD / SOP Only) H = 5KV I/O BV (DIP / SMD Only) H = 3.75KV I/O BV (SOP Only) |

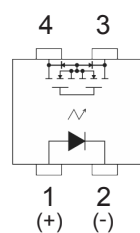
Part Number Example: XX30X-XX

AC30F-R1 = Series 30, 2 Form A, 8 Pin, SMD with tape and reel packaging

- **TOWARD** PhotoDMOS Relays
- 400 Volt, 120 mA
- On-Resistance: 24 Ω (typical)
- I/O Breakdown Voltage: SOP 1500 Vrms Min.
DIP / SMD 3750 Vrms Min.
- Optional High I/O BV: SOP 3750 Vrms Min.
DIP / SMD 5000 Vrms Min.
- Max LED Current 3.0 mA
- Low Off-State Leakage Current 1.0 μ A Max
- UL File E344988

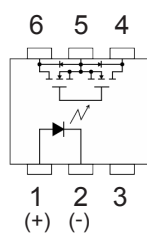
SCHEMATIC

AB30(F)(S)



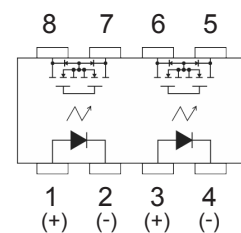
- 1: Anode (LED)
- 2: Cathode (LED)
- 3, 4: Drain (MOS FET)

AA30(F)



- 1: Anode (LED)
- 2: Cathode (LED)
- 3: NC
- 4, 6: Drain (MOS FET)
- 5: Source (MOS FET)

AC30(F)(S)



- 1, 3: Anode (LED)
- 2, 4: Cathode (LED)
- 5, 6, 7, 8: Drain (MOS FET)

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Rev: 0 - Date: June/17/2016 - Signature: BR

An ISO 9001 Certified Company

Part Number: 30 Series

General Purpose - 1 Form A / 2 Form A - PhotoDMOS Relays

Product Data Sheet

400 VOLTS

ABSOLUTE MAXIMUM RATINGS (Ambient Temperature: 25°C)

| ITEM | SYMBOL | VALUE | | | | | |
|------------------------------|---------------------------------------|-------------------|-----------------------|--------------------|------|----------------|------|
| | | SOP 4/8 | | DIP 4/8 SMD 4/8 | | DIP 6 SMD 6 | |
| | | 1CH | 2CH | 1CH | 2CH | 1CH | |
| OUTLINE PACKAGE | | | | | | | |
| Input | Continuous LED Current | I _F | 50 mA | | | | |
| | Peak LED Current (f=100 Hz, duty=1%) | I _{FP} | 500 mA | | | | |
| | LED Reverse Voltage | V _R | 5 V | | | | |
| | Input Power Dissipation | P _{In} | 75 mW | | | | |
| Output | Load Voltage | V _L | 400 V (AC peak or DC) | | | | |
| | Load Current (mA) | I _L | 100 | 85 | 120 | 100 | 120 |
| | Peak Load Current (1 ms, 1 shot) (mA) | I _{Peak} | 600 | 600 | 600 | 600 | 600 |
| | Output Power Dissipation (mW) | P _{Out} | 300 | 450 | 450 | 600 | 450 |
| Total Power Dissipation (mW) | | P _T | 350 | 500 | 500 | 650 | 500 |
| I/O Breakdown Voltage (Vrms) | | V _{I/O} | 1500 | 1500 | 3750 | 3750 | 3750 |
| Operating Temperature | | T _{Opr} | -40° +85°C | | | | |
| Storage Temperature | | T _{Stg} | -40° +100°C | | | | |

ELECTRICAL SPECIFICATIONS (Ambient Temperature: 25°C)

| ITEM | SYMBOL | MIN | TYP | MAX | UNITS | CONDITIONS |
|--------------|------------------------------|--------------------|-----------------|------|-------|---|
| Input | LED Forward Voltage | V _F | 1.0 | 1.17 | 1.5 | V I _F = 10mA |
| | Operation LED Current | I _{F On} | | 0.9 | 3.0 | mA |
| | Recovery LED Voltage | V _{F Off} | 0.5 | 1.0 | | V |
| Output | On-Resistance Drain to Drain | R _{On} | 24 | 30 | Ω | I _F = 5mA I _L = Rating Time to flow is within 1 sec. |
| | Off-State Leakage Current | I _{Leak} | | 1.0 | μA | V _L =400V |
| | Output Capacitance | C _{Out} | | 100 | | pF V _L =0V, f=1MHz |
| Transmission | Turn-On Time | T _{On} | 0.25 | 0.5 | ms | I _F = 5mA I _L = Rating (for SOP type) |
| | Turn-Off Time | T _{Off} | 0.05 | 0.2 | ms | |
| | Turn-On Time | T _{On} | 0.2 | 1.0 | ms | I _F = 10mA I _L = Rating (for DIP/SMD type) |
| | Turn-Off Time | T _{Off} | 0.05 | 0.5 | ms | |
| Coupled | I/O Insulation Resistance | R _{I/O} | 10 ⁹ | | Ω | |
| | I/O Capacitance | C _{I/O} | 1.3 | | pF | f = 1MHz |

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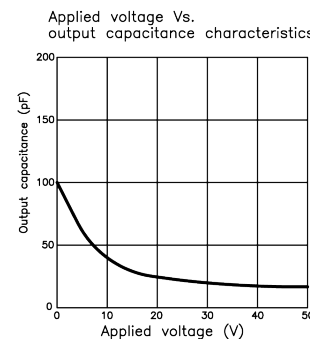
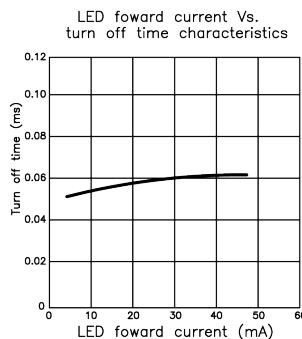
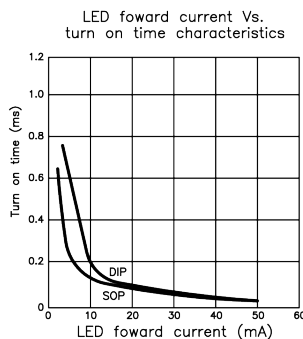
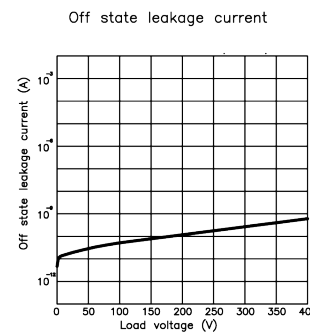
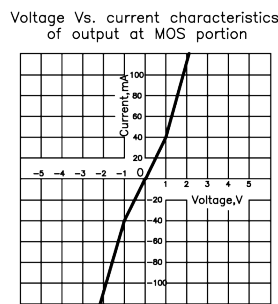
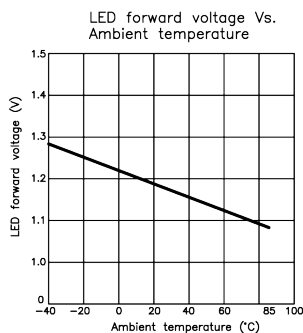
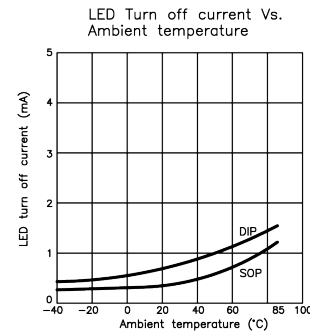
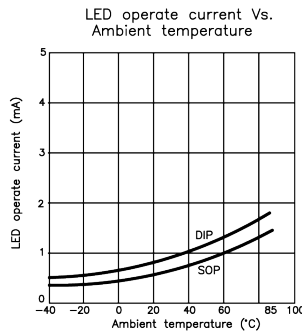
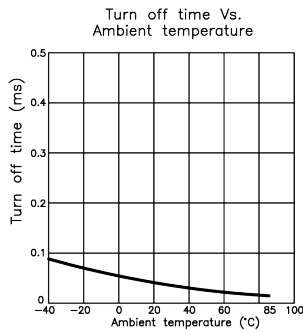
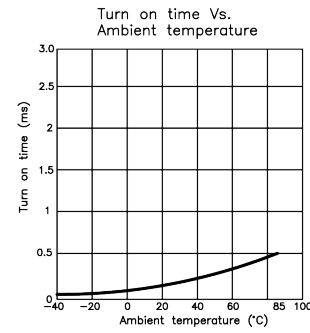
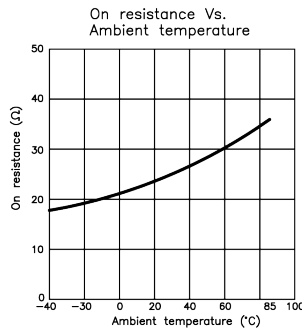
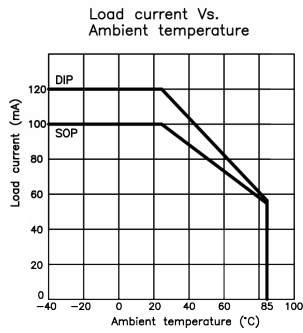
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GRAPHS



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