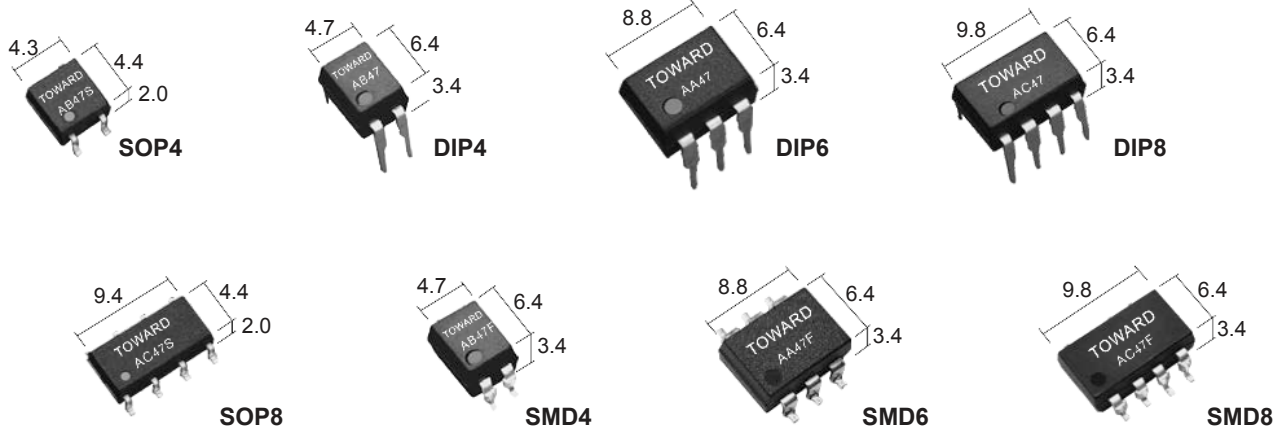


Part Number: 47 Series
High Current - 1 Form A / 2 Form A - PhotoDMOS Relays
Product Data Sheet

80 VOLTS

High Current up to 2A

PICTURE



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

✓ RoHS Compliant

ORDERING INFORMATION

FEATURES

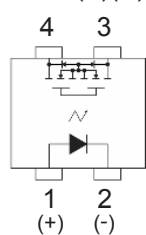
Body Style	Series	Options
AB = 4 pin AA = 6 pin AC = 8 pin	47	F = SMD S = SOP R1 = Tape & Reel (SMD / SOP Only) H = 5KV I/O BV (DIP / SMD Only) H = 3.75KV I/O BV (SOP)

- **TOWARD** PhotoDMOS Relays
- 80 Volt, 2.0 Amp High Current design
- On-Resistance: 0.15 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 μA Max
- UL File E344988

Part Number Example: XX47X-XX
 AB47S-R1 = Series 47, 1 Form A, 4 Pin, SOP with tape and reel packaging

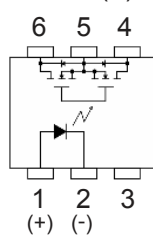
SCHEMATIC

AB47(F)(S)



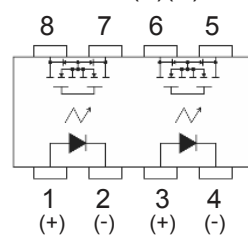
- 1: Anode (LED)
- 2: Cathode (LED)
- 3, 4: Drain (MOS FET)

AA47(F)



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

AC47(F)(S)



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

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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	80 V (AC peak or DC)				
	Load Current (A)	I _L	1.25	1.0	1.25	1.0	2.0
	Peak Load Current (1 ms, 1 shot) (A)	I _{Peak}	3.0	3.5	3.0	3.0	5.0
	Output Power Dissipation (mW)	P _{Out}	350	450	350	450	500
Total Power Dissipation (mW)		P _T	400	500	400	500	550
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	1.37	1.5	V I _F = 10mA
	Operation LED Current	I _{F On}		1.2	3.0	mA
	Recovery LED Voltage	V _{F Off}	0.5	1.0		V
Output	On-Resistance Drain to Drain	R _{On}		0.15 0.1(DIP6)	0.5 0.16(DIP6)	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 =80V
	Output Capacitance	C _{Out}		190 500(DIP6)		pF V _L =0V, f=1MHz
Transmission	Turn-On Time	T _{On}		0.7	3.0	ms I _F = 5mA
	Turn-Off Time	T _{Off}		0.06	0.5	ms I _L = Rating (for SOP/DIP4 - 8 type)
	Turn-On Time	T _{On}		0.7	3.0	ms I _F = 10mA
	Turn-Off Time	T _{Off}		0.04	0.5	ms I _L = Rating (for DIP6 type)
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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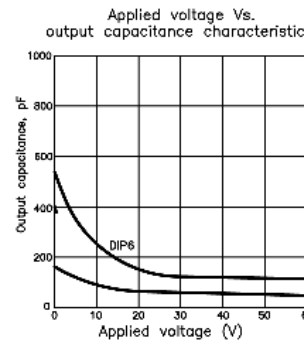
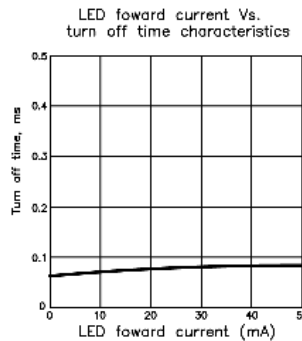
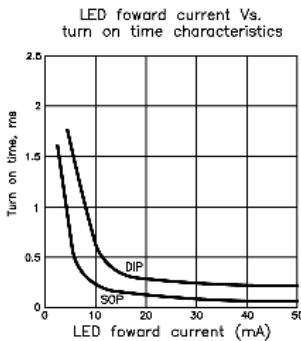
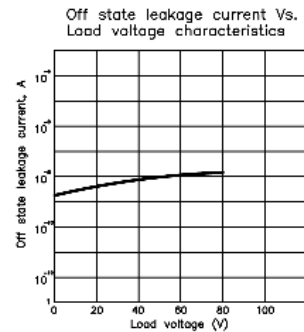
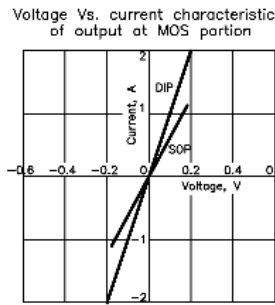
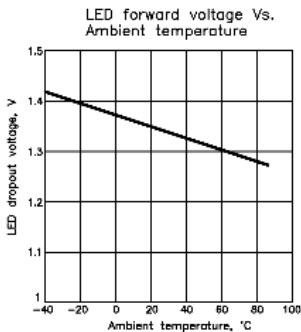
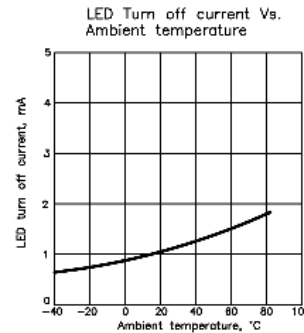
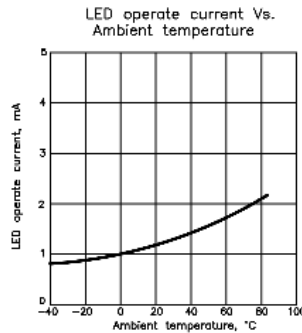
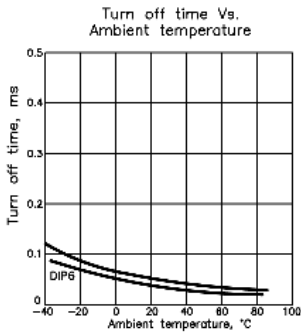
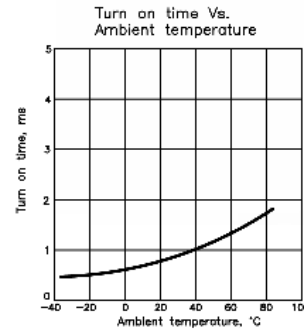
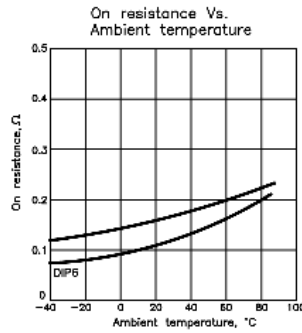
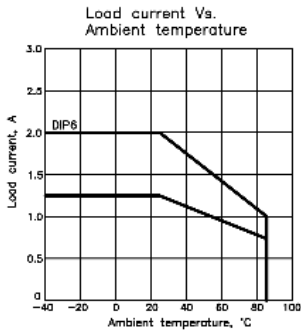
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GRAPHS



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