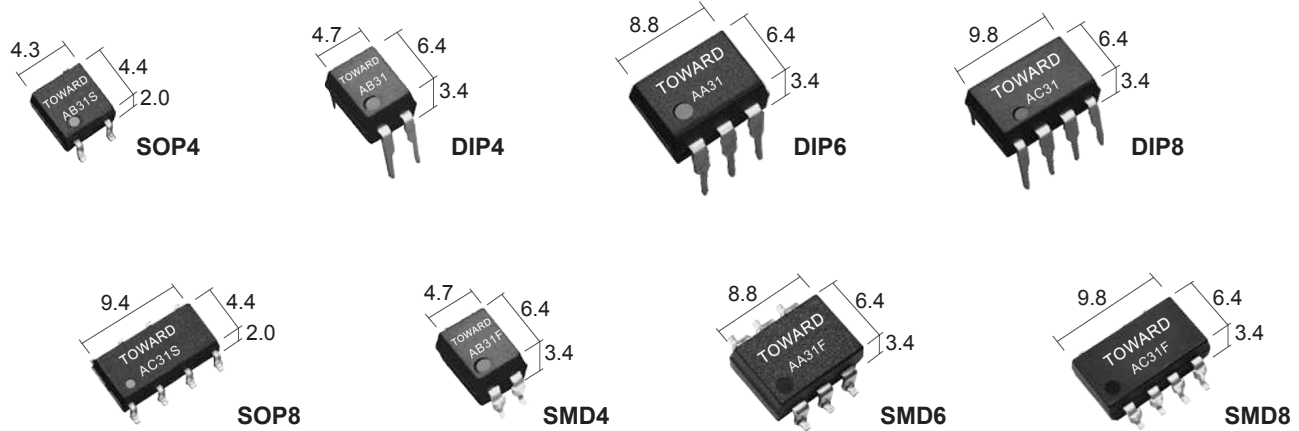


Part Number: 31 Series
General Purpose - 1 Form A / 2 Form A - PhotoDMOS Relays
Product Data Sheet

350 VOLTS

PICTURE



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

✓RoHS Compliant

ORDERING INFORMATION

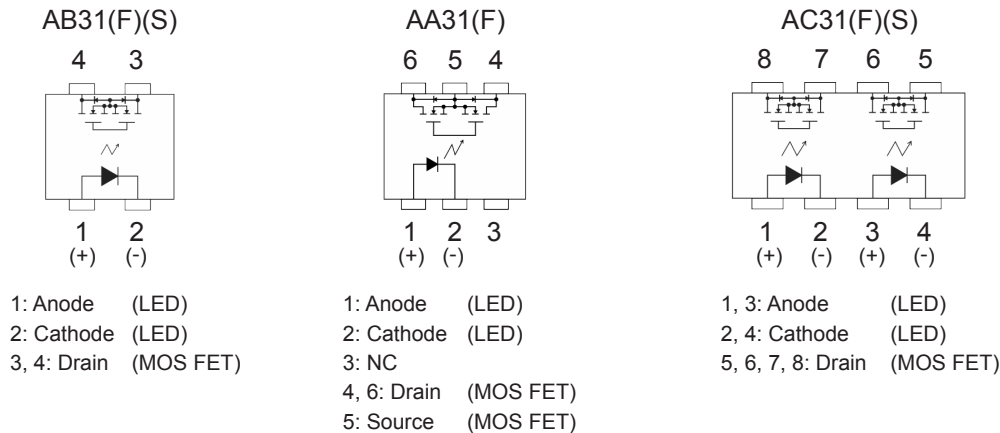
FEATURES

Body Style	Series	Options
AB = 4 pin AA = 6 pin AC = 8 pin	31	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)

- **TOWARD** PhotoDMOS Relays
- 350 Volt, 130 mA
- On-Resistance: 17 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: XX31X-XX
 AC31F-R1 = Series 31, 2 Form A, 8 Pin, SMD with tape and reel packaging

SCHEMATIC



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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	350 V (AC peak or DC)				
	Load Current (mA)	I _L	120	100	130	110	130
	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}		0.8	3.0	mA
	Recovery LED Voltage	V _{F Off}	0.5	1.0		V
Output	On-Resistance Drain to Drain	R _{On}		17	24	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 =350V
	Output Capacitance	C _{Out}		55		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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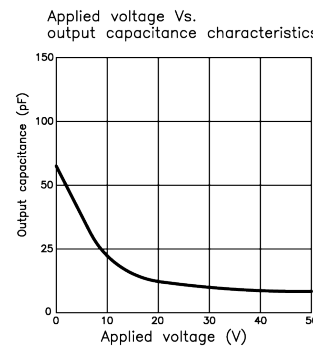
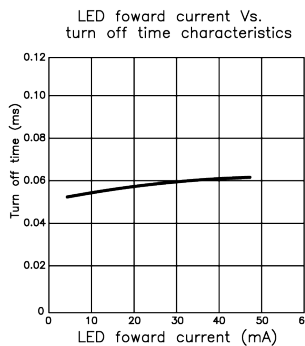
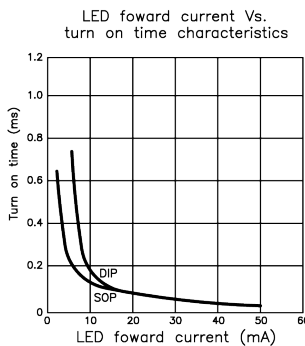
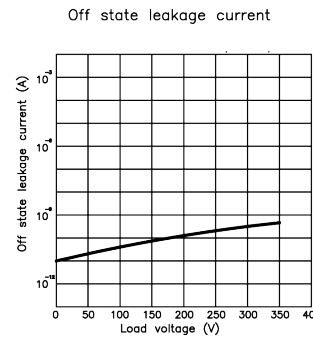
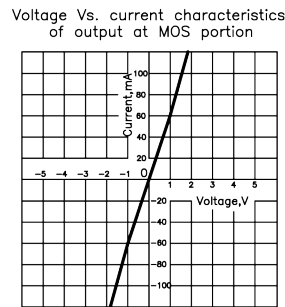
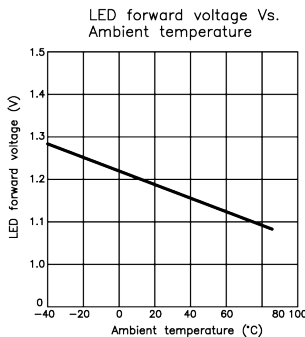
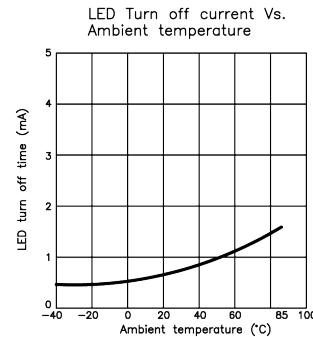
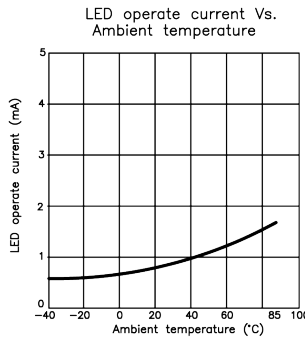
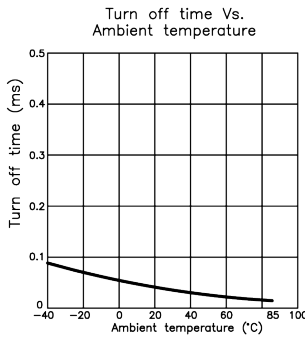
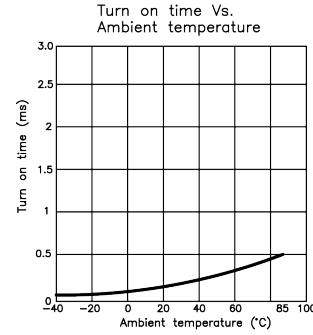
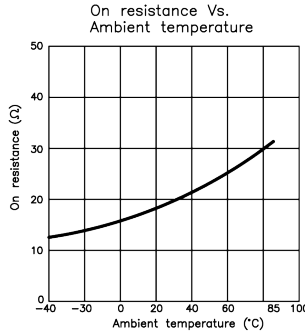
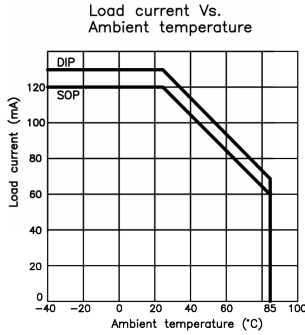
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GRAPHS



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