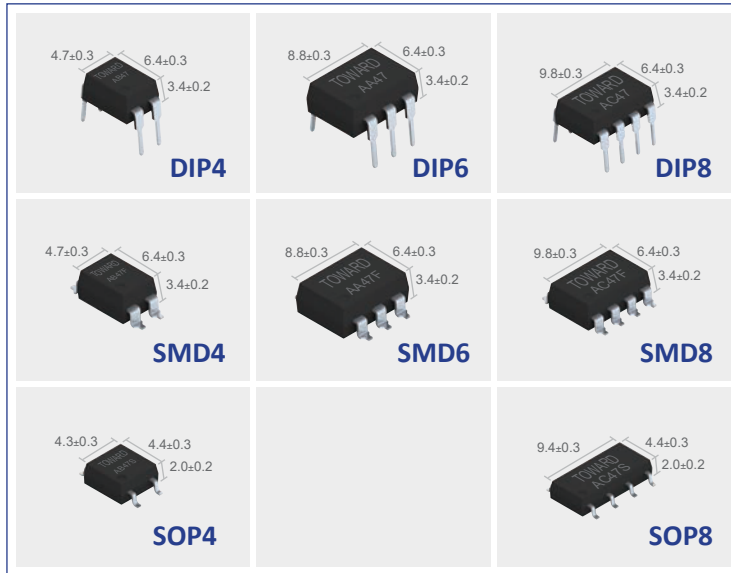




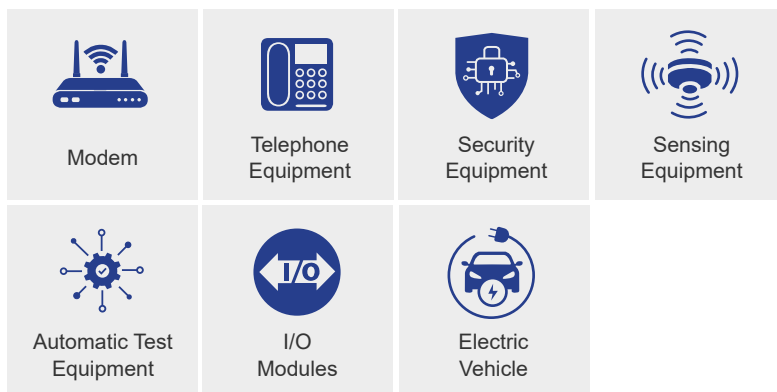
47 SERIES

AEC-Q101 / HI-TEMP (105°C)

80V/1.5A • 1a/2a



APPLICATIONS



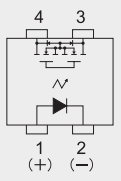
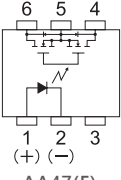
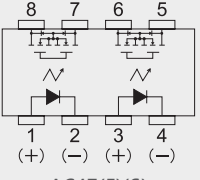
KEY FEATURES

- High voltage with low on-resistance
- Fast reverse recovery time
- High avalanche ruggedness
- AEC-Q101 QUALIFIED

SPECIFICATIONS

ITEM		PERFORMANCE CHARACTERISTICS
Contact Form		1a / 2a
Load Voltage	V _L	80V
Operation LED Current	I _{F ON}	3.0mA
Load Current	I _L	1.5A
On-Resistance	R _{ON}	0.17Ω
Output Capacitance	C _{OUT}	220pF
Low Off-State Leakage Current	I _{LEAK}	1.0μA

PIN DESCRIPTION & PART NUMBER

CIRCUIT DIAGRAM	PIN DESCRIPTION	PART NO.	PACKAGE	PACKING
 AB47(F)(S)	1: Anode (+) • LED 2: Cathode (-) • LED 3,4: Drain • MOSFET	AB47 AB47F AB47S AB47F-R1 AB47S-R1	DIP-4 SMD-4 SOP-4 SMD-4 SOP-4	Tube (90pcs) Tube (90pcs) Tube (100pcs) Reel (1000pcs) Reel (1000pcs)
 AA47(F)	1: Anode (+) • LED 2: Cathode (-) • LED 3: NC 4,6: Drain • MOSFET 5: Source • MOSFET	AA47 AA47F AA47F-R1	DIP-6 SMD-6 SMD-6	Tube (50pcs) Tube (50pcs) Reel (1000pcs)
 AC47(F)(S)	1,3: Anode (+) • LED 2,4: Cathode (-) • LED 5~8: Drain • MOSFET	AC47 AC47F AC47S AC47F-R1 AC47S-R1	DIP-8 SMD-8 SOP-8 SMD-8 SOP-8	Tube (45pcs) Tube (45pcs) Tube (50pcs) Reel (1000pcs) Reel (1000pcs)

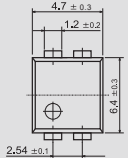
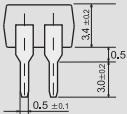
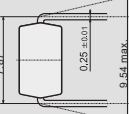
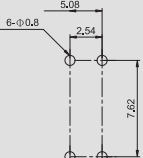
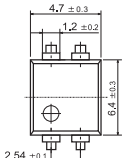
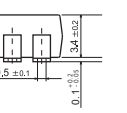
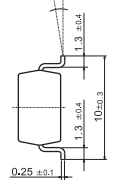
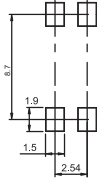
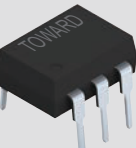
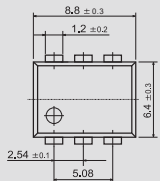
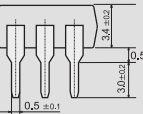
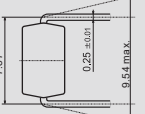
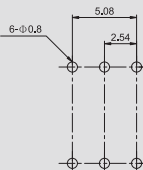
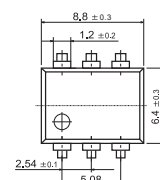
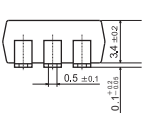
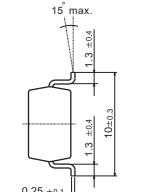
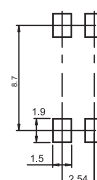
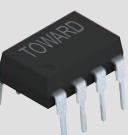
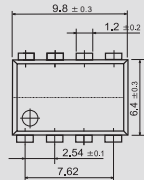
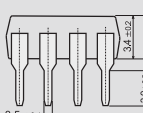
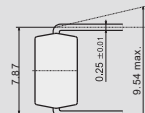
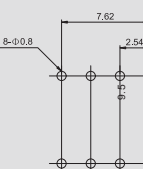
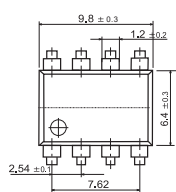
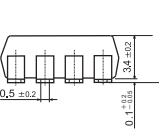
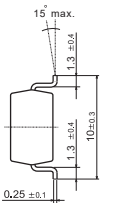
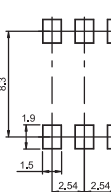
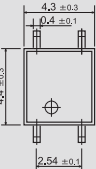
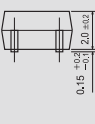
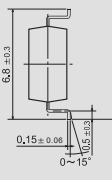
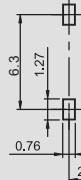
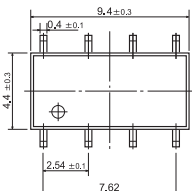
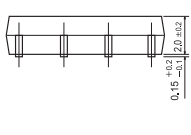
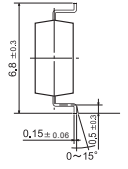
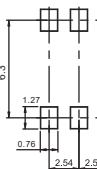
ABSOLUTE MAXIMUM RATINGS 絕對最大定格 (Ambient Temperature 周圍溫度 : 25℃)

ITEM		CONDITION	SYMBOL	VALUE					UNIT
Outline Package				AB47S	AC47S	AB47(F)	AC47(F)	AA47(F)	
				1CH	2CH	1CH	2CH	1CH	
Input 輸入	Continuous LED Current 連續 LED 電流		I _F	50					mA
	Peak LED Current LED 峰值電流	f=100 Hz,Duty=1%	I _{FP}	500					mA
	LED Reverse Voltage 逆向 LED 電壓		V _R	5					V
	Input Power Dissipation 輸入損耗		P _{IN}	75					mW
Output 輸出	Load Voltage 負荷電壓		V _L	80 (AC peak or DC)					V
	Load Current 負荷電流		I _L	1.25	1.0	1.25	1.0	1.5	A
	Peak Load Current 峰值負荷電流	1ms,1 shot	I _{PEAK}	3.0	3.0	3.0	3.0	3.0	A
	Output Power Dissipation 輸出損耗		P _{OUT}	350	450	350	450	500	mW
Relay 繼電器	Total Power Dissipation 全損耗		P _T	400	500	400	500	550	mW
	I/O Breakdown Voltage 入/出力間絕緣電壓		V _{I/O}	1500	1500	3750	3750	3750	V _{rms}
	I/O Breakdown Voltage 入/出力間絕緣電壓	Suffix-H	V _{I/O}	3750	3750	5000	5000	5000	V _{rms}
	Operating Temperature 使用時溫度		T _{OPR}	-40 ~ +85					°C
	Storage Temperature 保存溫度		T _{STG}	-40 ~ +100					°C

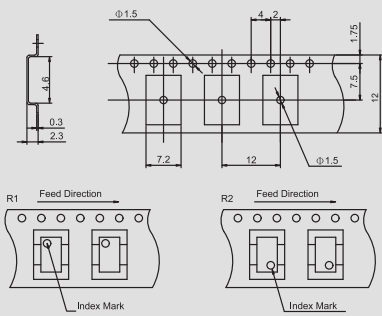
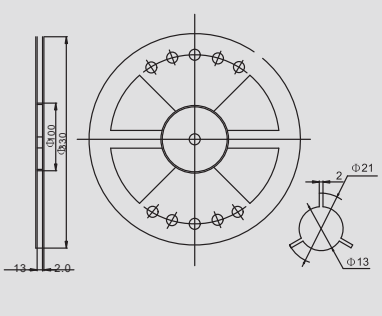
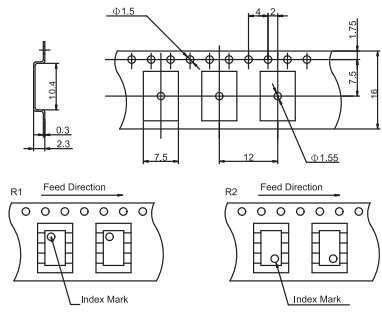
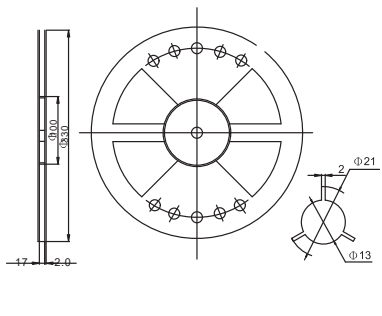
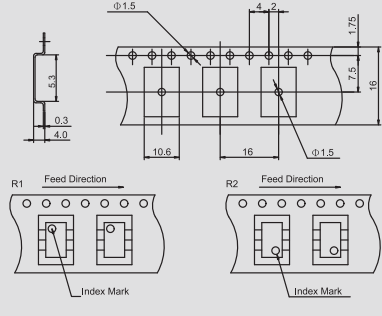
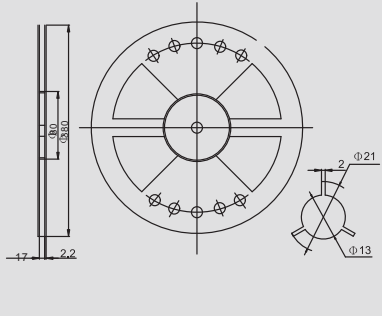
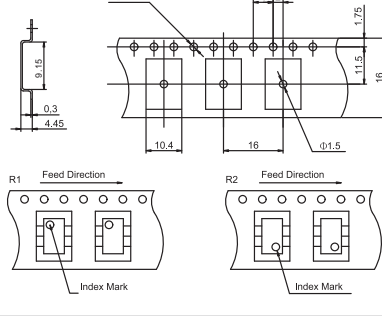
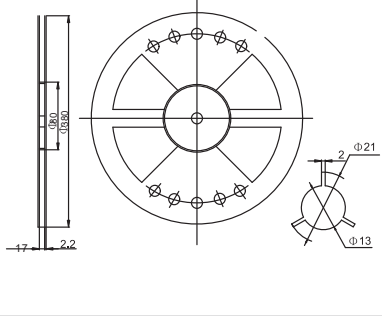
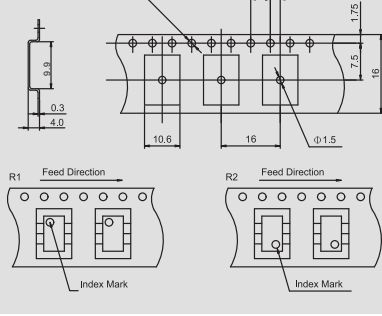
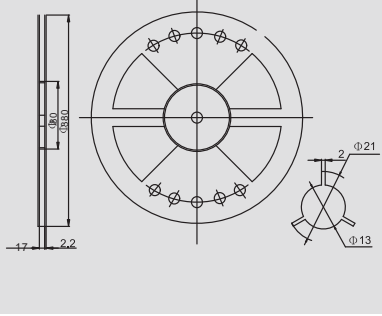
ELECTRICAL SPECIFICATIONS (Ambient Temperature 周圍溫度 : 25°C)

ITEM		CONDITION	SYM.	MIN.	TYP.	MAX.	UNIT
Input 輸入	LED Forward Voltage LED 順向電壓	I _F =10mA	V _F	1.0	1.37	1.5	V
	Operation LED Current LED 動作電流		I _{F ON}		1.0	3.0	mA
	Recovery LED Voltage LED 復位電壓		V _{F OFF}	0.5	1.0		V
Output 輸出	On-Resistance 導通電阻 Drain to Drain	I _F =5mA, I _L =Rating Time to flow is within 1sec.	R _{ON}		0.17	0.2	Ω
	Off-State Leakage Current 開路狀態漏電流	V _L =80V	I _{LEAK}			1.0	μA
	Output Capacitance 輸出端容量	V _L =0V, f=1MHz	C _{OUT}		220		pF
Transmission 傳達	Turn-On Time 動作時間	I _F =5mA, I _L =Rating (for SOP type)	T _{ON}		0.4	3.0	ms
	Turn-Off Time 復位時間		T _{OFF}		0.05	0.5	ms
	Turn-On Time 動作時間	I _F =10mA, I _L =Rating (for DIP/SMD type)	T _{ON}		0.3	3.0	ms
	Turn-Off Time 復位時間		T _{OFF}		0.05	0.5	ms
Coupled 結合	I/O Insulation Resistance 輸入/ 出間絕緣阻抗		R _{I/O}	10 ⁹			Ω
	I/O Capacitance 輸入/ 力端靜電容量	f=1MHz	C _{I/O}		1.3		pF

PACKAGE & PC BOARD PATTERN

PACKAGE	DIMENSIONS			PC BOARD PATTERN
 DIP4				 (Bottom View)
 SMD4				 (Top View)
 DIP6				 (Bottom View)
 SMD6				 (Top View)
 DIP8				 (Bottom View)
 SMD8				 (Top View)
 SOP4				 (Top View)
 SOP8				 (Top View)

PACKING SPECIFICATIONS

PACKAGE TYPE 包裝類型	TAPE SHAPE & DIMENSIONS 形狀和尺寸	REEL SHAPE & DIMENSIONS 圖帶形狀和尺寸	QUANTITY 數量
4 Pin SOP			1000 pcs
8 Pin SOP			1000 pcs
4 Pin SMD			1000 pcs
6 Pin SMD			1000 pcs
8 Pin SMD			1000 pcs

LOAD CONNECTING METHOD

TYPE 類型	LOAD 負荷	CONNECTION 接續方法	FEATURE 特長
4 Pin	AC or DC		Control bi-directional signal 可控制雙向信號
6 Pin	A AC or DC		Control bi-directional signal 可控制雙向信號
	B DC		On-Resistance is 1/2 of A-connection 導通電阻值是A接法的1/2 2-Make-contacts (Source Common)
	C DC		On-Resistance is 1/2 of B-connection 導通電阻值是B接法的1/2
8 Pin	AC or DC		2 input and 2 output 2 入力和2 出力回路
			1 input and 2 output 1 入力和2 出力回路