

42 Series

60V/5A·1a/2a [Preliminary]

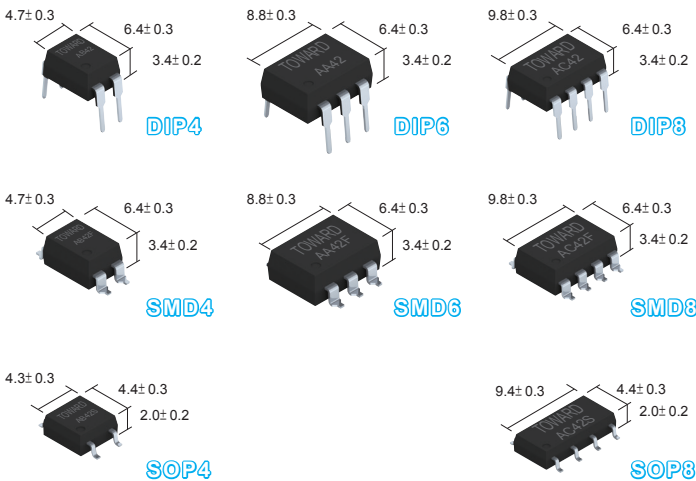


Features

- Contact Form 1a / 2a
- Load Voltage 60V
- Operation LED Current 3mA
- Load Current 5A
- On-Resistance 0.02Ω
- Output Capacitance 1300pF
- Low Off-State Leakage Current 1.0μA

Application

- Modem
- Telephone Equipment
- Security Equipment
- Sensing Equipment
- Automatic Test Equipment
- I/O Modules
- Electric Vehicle

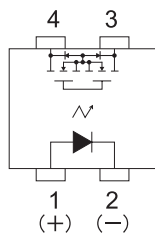


PART NO	PACKAGE	PACKING
AB42	DIP-4	Tube 90pcs
AA42	DIP-6	Tube 50pcs
AC42	DIP-8	Tube 45pcs
AB42F	SMD-4	Tube 90pcs
AA42F	SMD-6	Tube 50pcs
AC42F	SMD-8	Tube 45pcs
AB42S	SOP-4	Tube 100pcs
AC42S	SOP-8	Tube 50pcs
AB42F-R1	SMD-4	Reel 1000pcs
AA42F-R1	SMD-6	
AC42F-R1	SMD-8	
AB42S-R1	SOP-4	
AC42S-R1	SOP-8	

* Package & PCB Layout Design, See Page 134

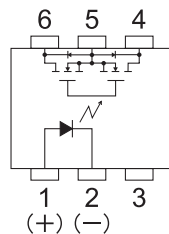
Terminal Identification

AB42(F)(S)



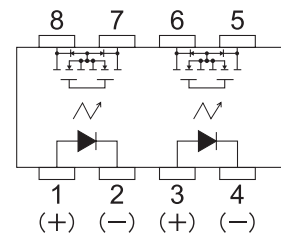
- 1: Anode (LED)
- 2: Cathode (LED)
- 3,4: Drain (MOS FET)

AA42(F)



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

AC42(F)(S)



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

Absolute Maximum Ratings 絕對最大定格 (Ambient Temperature 周圍溫度 : 25°C)

Item		Symbol	Value				
			AB42S	AC42S	AB42(F)	AC42(F)	AA42(F)
Outline Package			1CH	2CH	1CH	2CH	1CH
Input 輸入	Continuous LED Current 連續 LED 電流	I_F	50mA				
	Peak LED Current LED 峰值電流 (f=100 Hz,Duty=1%)	I_{FP}	500mA				
	LED Reverse Voltage 逆向 LED 電壓	V_R	5V				
	Input Power Dissipation 輸入損耗	P_{IN}	75mW				
Output 輸出	Load Voltage 負荷電壓	V_L	60V (AC peak or DC)				
	Load Current 負荷電流 (A)	I_L	2.5	2.0	2.5	2.0	5.0
	Peak Load Current 峰值負荷電流 (1ms,1 shot) (A)	I_{PEAK}	6.0	6.0	6.0	6.0	10.0
	Output Power Dissipation 輸出損耗 (mW)	P_{OUT}	400	450	400	450	600
Total Power Dissipation 全損耗 (mW)		P_T	450	500	450	500	650
I/O Breakdown Voltage 入 / 出力間絕緣電壓 (Vrms)		$V_{I/O}$	1500	1500	3750	3750	3750
I/O Breakdown Voltage 入 / 出力間絕緣電壓 (Suffix-H) (Vrms)		$V_{I/O}$	3750	3750	5000	5000	5000
Operating Temperature 使用時溫度		T_{OPR}	-40°C ~ +85°C				
Storage Temperature 保存溫度		T_{STG}	-40°C ~ +100°C				

Electrical Specifications 電性規格 (Ambient Temperature 周圍溫度 : 25°C)

Item		Symbol	MIN.	TYP.	MAX.	Units	Conditions
Input 輸入	LED Forward Voltage LED 順向電壓	V_F	1.0	1.37	1.5	V	$I_F=10mA$
	Operation LED Current LED 動作電流	$I_{F ON}$		1.0 1.7(DIP6)	5.0	mA	
	Recovery LED Voltage LED 復位電壓	$V_{F OFF}$	0.5	1.2		V	
Output 輸出	On-Resistance 導通電阻 Drain to Drain	R_{ON}		0.053 0.02 (DIP6)	0.064 0.024 (DIP6)	Ω	$I_F=5mA, I_L=Rating$ Time to flow is within 1sec.
	Off-State Leakage Current 開路狀態漏電流	I_{LEAK}			1.0	μA	$V_L=60V$
	Output Capacitance 輸出端容量	C_{OUT}		400 1300(DIP6)		pF	$V_L=0V, f=1MHz$
Transmission 傳達	Turn-On Time 動作時間	T_{ON}		0.8	3.0	ms	$I_F=5mA$ $I_L=Rating$ (for SOP/DIP4,8 type)
	Turn-Off Time 復位時間	T_{OFF}		0.05	0.5	ms	
	Turn-On Time 動作時間	T_{ON}		1.2	3.0	ms	$I_F=10mA$ $I_L=Rating$ (for DIP6 type)
	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	$C_{I/O}$		1.3		pF	$f=1MHz$