



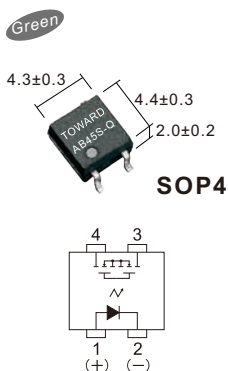
**THE DATASHEET OF
AB45S-Q-R1**



AB45S-Q

60V • 1 Form A

AEC-Q101
Certification



RoHS compliant

Features

- Contact Form 2a
- Load Voltage 60 V Max.
- Operation LED Current 3mA Max.
- Load Current 200mA Max.
- On-Resistance 2Ω Typ.
- Output Capacitance 20 pF Typ.

Application:

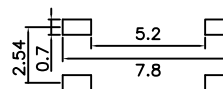
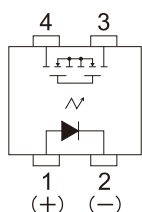
- Automobile BMS Controller
- Energy Storage System
- Big-data storage

Part Identification

SOP Type		Quantity
Stick	Tape & Reel	Stick 100
	Feed direction : Pin No. 3,4	Tape 1000
AB45S-Q	AB45S-Q-R1	

Terminal Identification 電路結構圖

Terminal Identification



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

* Recommended Soldering Pattern
For Reflow Soldering

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

Item		Symbol	Value
Input 輸入	Continuous LED Current 連續的LED電流	I _F	50mA
	Peak LED Current LED的峰值電流 (f=100 Hz duty=1%)	I _{FP}	500mA
	LED Reverse Voltage 逆向的LED電壓	V _R	5V
	Input Power Dissipation 容許損失	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	I _L	200mA
	Peak Load Current 峰值負荷電流(1 ms,1 shot)	I _{Peak}	600mA
	Output Power Dissipation 電流損耗	P _{Out}	300mW
Total Power Dissipation 全損耗		P _T	350mW
I/O Breakdown Voltage 入/出力間絕緣電壓		V _{I/O}	1500Vrms Min.
Operating Temperature 使用時周圍溫度 *		T _{Opr}	-40°C ~ +105°C
Storage Temperature 周圍保存溫度 *		T _{Stg}	-40°C ~ +125°C

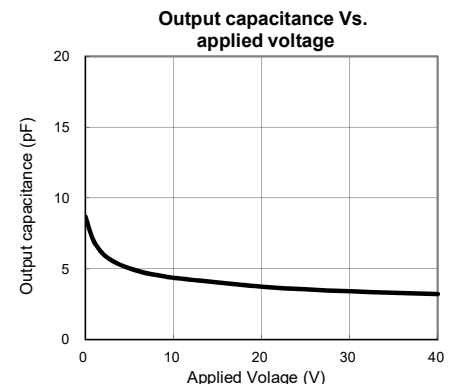
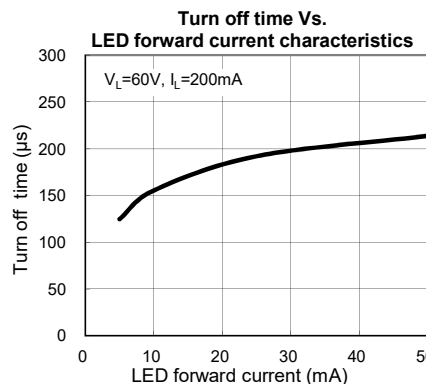
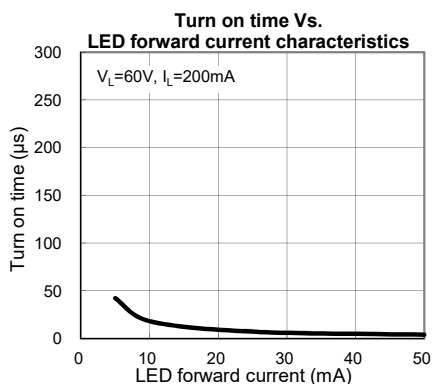
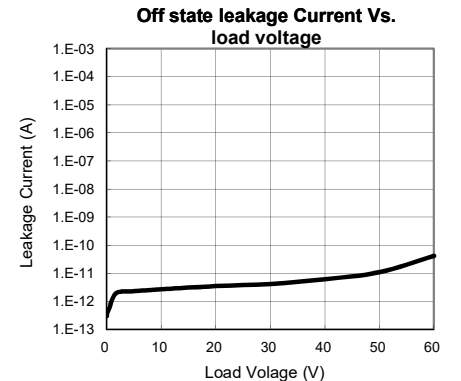
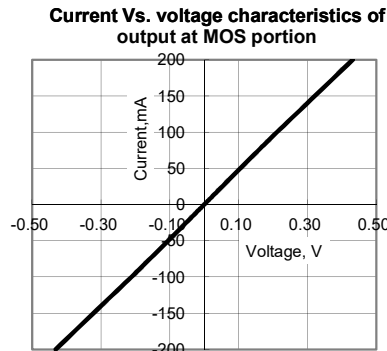
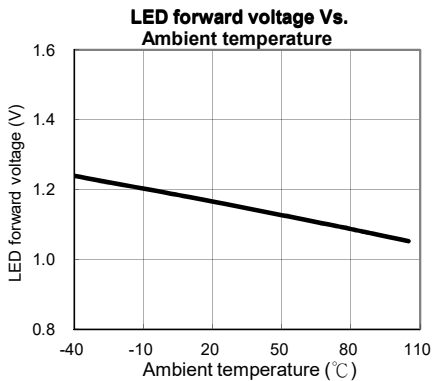
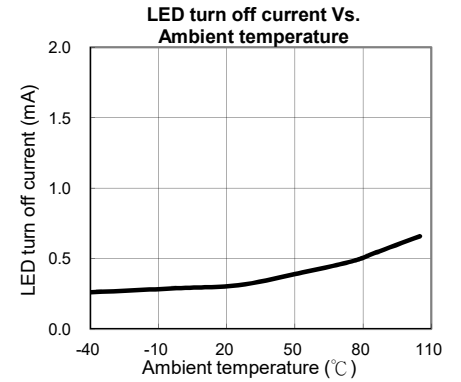
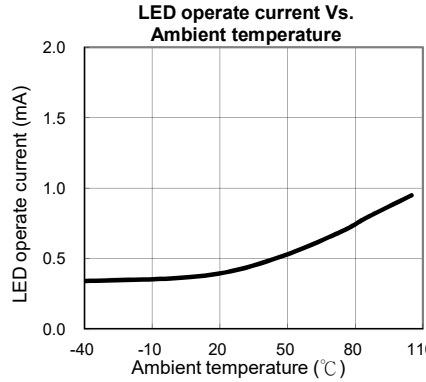
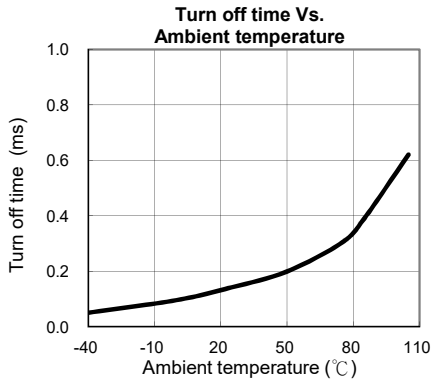
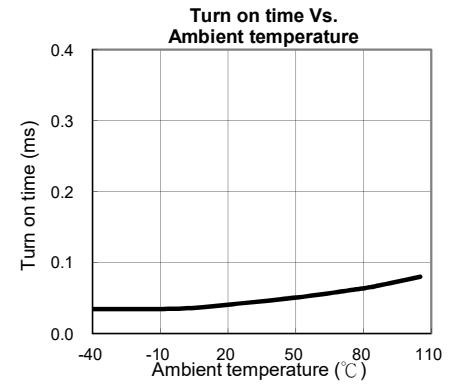
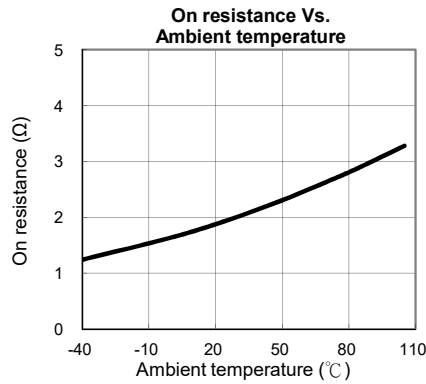
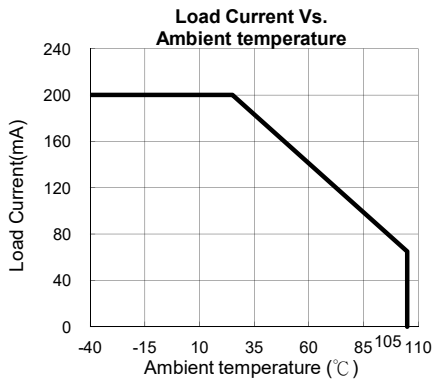
* The temperature is based on AEC-Q101 certification.

Recommended Operating Condition 建議使用條件 (Ambient Temperature 周圍溫度: 25 °C)

Item	Symbol	Number of used channels	MIN.	TYP.	MAX.	units
Continuous LED Current 連續的 LED電流	I _F		5	10	15	m A
Load Voltage 負荷電壓	V _L		---	---	30	V
Load Current 負荷電流	I _L		---	---	100	m A

Electrical Specifications LED順向電壓 (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	0.9	1.17	1.3	V	I _F =10mA
	Operation LED Current LED的動作電流	I _{F On}		0.5	3	mA	
	Recovery LED Voltage LED的恢復電壓	V _{F off}	0.5	1		V	
Output 輸出	On-Resistance 導通電阻 Drain to Drain	R _{On}		2	5	Ω	I _F =5mA, I _L = Rated Current Time to flow is within 1sec.
	Off-State Leakage Current 開路狀態時的電流	I _{Leak}			1	uA	V _L =60V
	Output Capacitance 輸出端容量	C _{Out}		20		pF	V _L =0V, f=1MHz
Transmission 傳達	Turn-On Time 動作時間	T _{On}		0.05	0.5	ms	I _F =5mA I _L =Rated Current
	Turn-Off Time 復位時間	T _{Off}		0.13	0.5	ms	
Coupled 結合	I/O Insulation Resistance 輸入/出間的絕緣阻抗	R _{I/O}	10 ⁹			Ω	
	I/O Capacitance 輸入/力端的靜電容量	C _{I/O}		1.3		pF	f=1MHz



PhotoDMOS-FET Relay
General-Purpose

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- [Bright Toward Industrial Co., Ltd. Information](#)

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