

CotoMOS® C245S-A/C345S-A

When automotive grade performance and a small package size is required, the AEC-Q101 Certified C245S-A or C345S-A is your best choice. Configured in an industry-standard SOP package, both the 4 pin, 1-Form A C245S-A and the 8 pin, 2 Form A C345S-A feature a low on-resistance of 3Ω-5Ω max. and a low output capacitance of 20 pF nominal, which is necessary for fast switching. In addition, the C345S-A offers two fully-independent Form A channels for further space savings that can be configured in series mode for even higher current switching. Both MOSFET relays are ideally suited to the needs of Battery Management, Data Storage and general Automotive Switching requirements.

C245S-A/C345S-A Features

- ▶ Contact Form: C245S-A: 1A / C345S-A:2A
- ▶ Load Voltage: 60V Maximum
- ▶ Operation LED Current: 3.0mA Maximum
- ▶ Load Current: 200mA Maximum
- ▶ Low On-Resistance: 3Ω Maximum
- ▶ Output Capacitance: 20pF Typical
- ▶ AEC-Q101 Certified

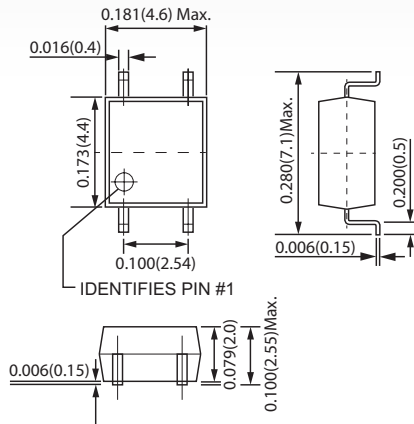
APPLICATIONS

- ▶ Automobile
- ▶ Energy Storage System
- ▶ Data Storage

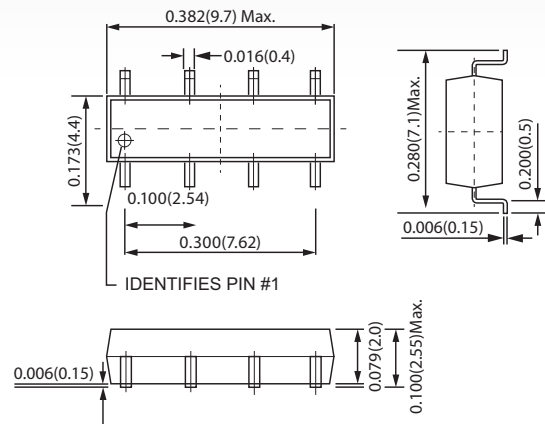
DIMENSIONS

in Inches (Millimeters)

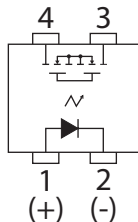
C245S-A



C345S-A

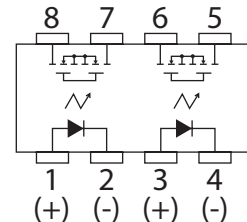


TERMINAL IDENTIFICATION



1: Anode (LED) 2: Cathode (LED)	3,4: Drain (MOSFET)
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TERMINAL IDENTIFICATION



1,3: Anode (LED) 2,4: Cathode (LED)	5,6,7,8: Drain (MOSFET)
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C245S-A/C345S-A MAXIMUM RATINGS (Ambient Temperature: 25°C)

Parameters	Symbol	Units	Value	
INPUT SPECIFICATIONS			C245S-A	C345S-A
Continuous LED Current	I _F	mA	50	50
Peak LED Current (f=100Hz, duty=1%)	I _{FP}	mA	500	500
LED Reverse Voltage	V _R	V	5	5
Input Power Dissipation	P _{in}	mW	75	75
OUTPUT SPECIFICATIONS				
Load Voltage	V _L	V (AC peak or DC)	60	60
Load Current	I _L	mA	200	200
Peak Load Current (1 ms, 1 shot)	I _{Peak}	mA	600	600
Output Power Dissipation	P _{Out}	mW	300	300 (1Ch)/450 (2Ch)
RELAY SPECIFICATIONS				
Total Power Dissipation	P _T	mW	350	350 (1Ch)/500 (2Ch)
I/O Breakdown Voltage	V _{I/O}	V _{rms} Min.	1500	1500
Operating Temperature*	T _{Opr}	°C	-40 ~ +105	-40 ~ +105
Storage Temperature*	T _{Stg}	°C	-40 ~ +125	-40 ~ +125

*The temperature is based on AEC-Q101 certification.

C245S-A/C345S-A ELECTRICAL SPECIFICATIONS (Ambient Temperature: 25°C)

Parameters	Symbol	Test Conditions	Units	Min	Typ	Max
INPUT						
LED Forward Voltage	V _F	I _F =10mA	V	0.9	1.17	1.3
Operation LED Current	I _{F On}		mA		1	3
Recovery LED Voltage	V _{F Off}		V	0.5	1.0	
OUTPUT						
On-Resistance Drain to Drain	R _{On}	I _F =5mA, I _L =Rated Current Time to flow is within 1 sec.	Ω		3	5
Off-State Leakage Current	I _{Leak}	V _L =60V	μA			1.0
Output Capacitance	C _{Out}	V _L =0V, f=1MHz	pF		20	
TRANSMISSION						
Turn-On Time	T _{On}	I _F =5mA, I _L =Rated Current	ms		0.1	0.5
Turn-Off Time	T _{Off}		ms		0.08	0.2
COUPLED						
I/O Insulation Resistance	R _{I/O}		Ω	10 ⁹		
I/O Capacitance	C _{I/O}	f=1MHz	pF		1.3	

Environmental Ratings:

Operating Temp: -40°C to +105°C; Storage Temp: -40°C to +125°C.

All electrical parameters measured at 25° C unless otherwise specified.

C245S-A/C345S-A SERIES GRAPHS

