

OP05CA Series open LED protectors provide a switching electronic shunt path when an LED in an LED string fails as an open circuit. This ensures that the remaining string of LEDs will continue to function if a single LED does not. OP05CA Series devices were designed to enable higher reliability in indoor LED lighting applications such as advertisement lighting and other applications. Additionally, they are molded from white material to make them

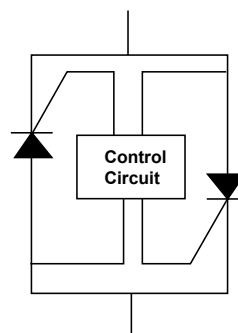
less visible in the LED fixture and the white molding also reflects more light to improve overall light engine efficiency. Compatible with one, two and three watt LEDs that have a nominal 3V forward characteristic, OP05CA Series devices are available in SMA surface mount package. The DO-214AC (SMA) low profile package is ideal for dense board applications.



产品特点 Product Features

- Fast switching
- Automatically resets after power cycle
- Low profile, small foot print standard DO-214AC package
- Compatible with industrial lighting environments
- Compatible with PWM frequencies up to 30 kHz
- RoHS compliant and halogen-free

原理图符号 Schematic Symbol



电子特性 Electrical Characteristics

Part	Symbol	Parameter	Conditions	MIN	TYP	MAX	Unit
OP05CA	V _{TO}	Turn-On Voltage		5	10	12	V
	I _S	Switching Current				20	mA
	I _{OS}	On-State Current			1	1.5	A
	V _{OS}	On-State Voltage	I _{AK} = 1A		1	1.3	V
	I _{DRM}	Leakage Current	V _{AK} = 3.5 V		10	15	μA
	V _{ESD}	ESD Withstand Voltage1	IEC61000-4-2 (Contact)	± 8			kV
			IEC61000-4-2 (Air)	± 15			kV

Thermal Considerations

Package	Symbol	Parameter	Value	
DO-214AC 	T_J	Operating Junction Temperature Range	-40 to +150°C	
	T_S	Storage Temperature Range	-65 to +150°C	
	$R_{\theta JA}$	Thermal Resistance: Junction to Ambient	DO-214AA: 90 ¹ DO-214AA: 90 ²	

Notes:

1) Standard FR-4 PCB with Copper Pads (Recommended Size)

2) Aluminum PCB

Thickness: 1.6mm

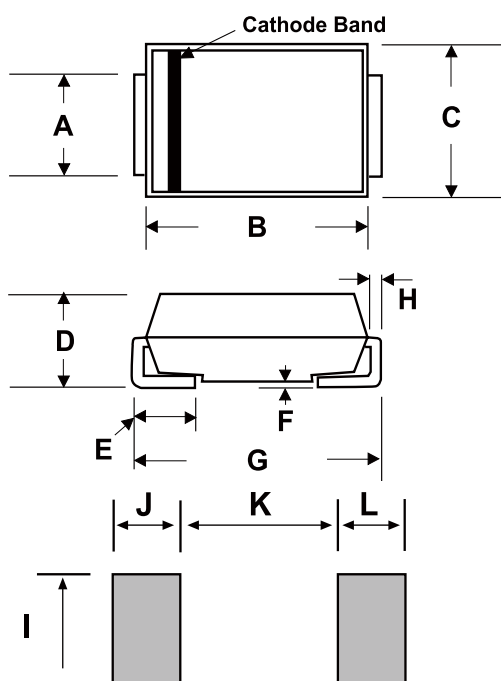
Grade: 1-2 W/mK Thermal Conductivity

Trace thickness: 2 oz

Insulation layer thickness: 215 um

Solder Pad Dimensions: 2.0mm x 2.8mm (Recommended Size)

尺寸图 DIMENSIONS



Unit:mm

DIM	Inches		Millimeters	
	Min	Max	Min	Max
A	0.049	0.065	1.250	1.650
B	0.157	0.177	3.990	4.500
C	0.100	0.110	2.540	2.790
D	0.078	0.090	1.980	2.290
E	0.030	0.060	0.780	1.520
F	-	0.008	-	0.203
G	0.194	0.208	4.930	5.280
H	0.006	0.012	0.152	0.305
I	0.070	-	1.800	-
J	0.082	-	2.100	-
K	-	0.090	-	2.300
L	0.082	-	2.100	-

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