



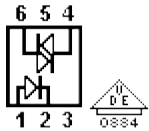
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MOC3009, 3010, 3011, 3012 OPTICALLY COUPLED ISOLATORS

Circuit



Features

- Rated Impulse Voltage (Transient Overvoltage).
- Insulation Test Voltage (Partial Discharge Test Voltage) $V_{PD}=1.6$ kV.
- Creeping Current Resistance according to VDE 0303/IEC 112
- Rated Insulation Voltage (RMS includes DC) $V_{IOWM}=250$ V_{RMS}
- Rated Recurring Peak Voltage (Repetitive) $V_{IORM}=250$ V_{RMS}
- Comparative Tracking Index CTI=275

Description

The PT3009 series are constructed from a Gallium Arsenide Infrared Emitting Diode and Silicon Triac Bi directional (double Thyristor) Detector, housed in a plastic package. Surface Mount Option Available. All electrical parameters are 100% tested by manufacturing. Specifications are guaranteed to a cumulative 0.65% AQL.

Absolute Maximum Ratings

Emitter

Reverse Voltage:	6V
Forward Current:	60mA
Forward Surge Current:	3A
Power Dissipation:	100mW
Derate Linearly:	1.33mW/°C above 25°C
Junction Temperature:	125°C

Detector

Off-State Output Terminal Voltage:	250V
On-State RMS Current:	100mA
Peak Surge Current:	1.2A
Collector Peak On-State Current:	2A
Power Dissipation:	300mW
Junction Temperature:	125°C

Coupled Device

Total Power Dissipation:	330mW
Storage Temperature Range:	-55°C to +125°C
Ambient Temperature Range:	-40°C to +100°C
Soldering Temperature:	260°C

Electro-optical Characteristics (Ta=25°C)

INPUT DIODE	PARAMETER	CONDITIONS	TYP	MAX	UNIT
V _F	Forward Voltage	I _F =10mA		1.5	V
I _R	Reverse Current	V _R =3V		100	µA
OUTPUT PHOTOSENSOR					
I _{DRM}	Peak Blocking Current, Either Direction	V _{DRM} =400V		100	nA
V _{TM}	Peak On-State Voltage, Either Direction	I _{TM} =100mA Peak		3	V
dV/dt	Critical Rate of Rise of Off-State-Voltage	R _L =4kohm	15		V/µs
COUPLED	PARAMETER	CONDITIONS	TYP	MAX	UNIT
I _{FT}	LED Trigger Current Required to Latch Output				
	MOC3009	Main Terminal Voltage=3V		30	mA
	MOC3010			15	mA

	MOC3011			10	mA
	MOC3012			5	mA
I_H	Holding Current, Either Direction		100		μA

Notes

1. Measured with input leads shorted together and output leads shorted together.

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