

66186 TWO CHANNEL, HERMETICALLY SEALED OPTOCOUPLER PHOTOTRANSISTOR OUTPUT

Mii
OPTOELECTRONIC PRODUCTS
DIVISION

Features:

- 2 Channels of high voltage MC-099
- 1500 Vdc isolation test voltage
- TTL/CMOS compatible input
- Small size, dense package
- Hermetic seal for high reliability
- Element evaluation performed upon request

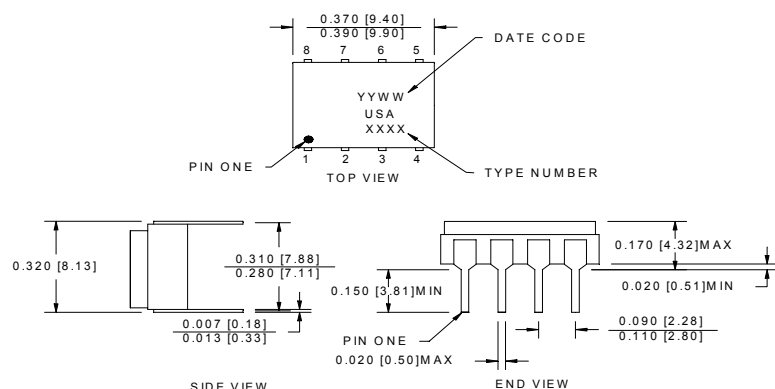
Applications:

- COTS
- Military and Space
- High reliability systems
- Isolated receiver input
- Communication systems
- Medical systems

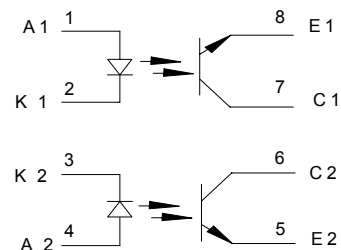
DESCRIPTION

The **66186** is a two channel optocoupler with both output phototransistors isolated for independent operation. Each channel has an LED and a phototransistor. Maximum isolation can be achieved while providing high current transfer ratios. The 66186 is in a 8 pin hermetically sealed package and is available in COTS, standard, and screened versions or tested to customer specifications.

Package Dimensions



Schematic Diagram



ABSOLUTE MAXIMUM RATINGS

Storage Temperature.....	-65°C to +150°C
Operating Temperature	-55°C to +125°C
Lead Solder Temperature.....	260°C for 10s (1.6mm below seating plane)
Peak Forward Input Current (each channel)	60mA (1ms duration)
Average Forward Input Current (each channel).....	20mA
Input Power Dissipation (each channel).....	75mW
Reverse Input Voltage (each channel)	5V
Output Current - I_O (each channel)	25mA
Output Power Dissipation (each channel).....	40mW
Output voltage - V_O (each channel)	70V

ELECTRICAL CHARACTERISTICST_a = 25°C, unless otherwise specified

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS	NOTE
Forward voltage	V _F		1.5	1.7	V	I _F = 20mA	1
Reverse Breakdown Voltage	V _{BR}	6			V	I _R = 10μA	1
Reverse Current	I _R			10	μA	V _F = 6V	1
Capacitance	C _{IN}		20		pF	V _F = 0V, f = 1MHz	1
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	70			V	I _C = 1mA, I _F = 0	1
Collector-Emitter Saturated Voltage	V _{CESAT}		0.25	0.4	V	I _F = 20mA, I _C = 1mA	1
Leakage Current	I _{CEO}			50	nA	V _{CE} = 10V	1
Saturated Current Transfer	CTR _{SAT}	70	210	250	%	I _F = 10mA, V _{CE} = 0.4V	1
Current Transfer Ratio	CTR	100	300	450	%	I _F = 10mA, V _{CE} = 10V	1
Insulation Resistance	R ₁₀		10 ¹²		Ω	V ₁₀ = 500 VDC	2
Leakage Current	I _{OH}			100	NA	V _{CE} = 10 V	1
Rise Time	t _r			20	μs	V _{CC} = 10V, I _F = 10mA, R _L = 100Ω	1
Fall Time	t _f			20	μs	V _{CC} = 10V, I _F = 10mA, R _L = 100Ω	1

NOTES:

- Each channel.
- Package

SELECTION GUIDE

PART NUMBER	PART DESCRIPTION
66186-000	Two Channel with 100% device screening (-55°C to +125°C)
66186-002	Two Channel, commercial, lot sample tested over full military temperature range (-55°C to +125°C)
66186-004	Two Channel commercial lot sample testing (-40° to 85°C) Optocoupler
66186-003	Two Channel commercial lot sample testing (0° to 70°C) Optocoupler