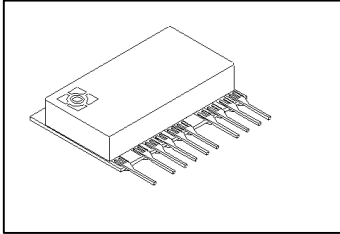


**OM9402SP**



**GATE DRIVER**

For Driving IGBT Modules  
600V and 1200V, 150A to 600A

**FEATURES**

- Rugged High Density Industrial Package
- Built in Short Circuit Protection with Fault Output
- High CMRR Optocoupler
- CMOS/TTL Compatible Input Interface

**DESCRIPTION**

This series of gate drivers are ideally suited for driving the CERMOD™ family of IGBT Power Modules, where small size, high performance and high reliability are required. Designed specifically for high power motor controls, inverters, switching power supplies, choppers and high energy pulse circuits in the aerospace, defense, transportation, industrial and medical equipment industries.

**ABSOLUTE MAXIMUM RATINGS (Tc=25°C unless otherwise noted)**

Characteristic	Symbol	Min.	Typ.	Max.	UNIT
Operating Temperature	T <sub>A</sub>	-40	-	100	°C
Peak Output Current	I <sub>O(PEAK)</sub>	-	-	8	A
Logic Input Voltage	V <sub>CC</sub>	-	5	5.25	V
Gate Positive Supply Voltage	+V <sub>G</sub>		15	16	V
Gate Negative Supply Voltage	-V <sub>G</sub>	-14	-	-0.5	V
Fault Output current	I <sub>FLT</sub>	-	-	8	mA
Isolation Voltage	Vis			2500	VAC 1min

**ELECTRICAL CHARACTERISTICS: OM9402SP (Tc= 25°C unless otherwise specified)**

Parameter	Test Condition	Min.	Typ.	Max	Unit
-----------	----------------	------	------	-----	------

**SWITCHING CHARACTERISTICS**

$t_{PLH}$ Signal to High Level Output Propagation Delay Time	RG=2.5Ω, CG=2200pF fPWM=10kHz Duty=50%	0.15	0.30	0.55	μS
$t_{PHL}$ Signal to Low Level Output Propagation Delay Time		0.15	0.32	0.55	μS
( $t_{PHL}$ - $t_{PLH}$ ) Propagation Delay Difference Between Any Two Parts		-0.4	0.4		μS
$t_r$ Rise Time			0.15		μS
$t_f$ Fall Time			0.15		μS
CM  Output Common Mode Transient Immunity	V <sub>CM</sub> =1500V	15	25		kV/μS
V <sub>C</sub> Desat. (Collector) Threshold		6.5	7.0	7.5	V
V <sub>SIG</sub> Logic Low Signal Voltage				0.8	V
V <sub>SIG</sub> Logic High Signal Voltage		2.0			V
I <sub>SIG</sub> Logic Low Current	V <sub>IN</sub> =0.4V	-0.5	-0.4		mA
V <sub>UVLO+</sub> UVLO Threshold Positive	V <sub>OUT</sub> >5V	11.5	13.0	13.6	V
V <sub>UVLO-</sub> UVLO Threshold Negative	V <sub>OUT</sub> <5V		11.8	12.4	V

**SUPPLY VOLTAGES**

V <sub>CC</sub> Logic Input Voltage (Recommended)	4.75	5	5.25	V
+V <sub>G</sub> Gate Positive Supply Voltage (Recommended)	14.5	15		V
-V <sub>G</sub> Gate Negative Supply Voltage(Recommended)	-10		-8	V

R<sub>G</sub>- specified in the IGBT module data sheet

