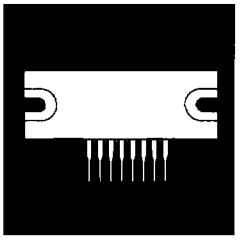
POWER MOSFET DUAL, HIGH-CURRENT DRIVER MCM IN A PLASTIC AND METAL PACKAGE



Versatile, Dual Output Multi-Chip-Modules (MCM's) Provide High-Current/High-Voltage Driver Capability In Power SIP

FEATURES

- Output Voltage Ratings: 60V, 100V, Or 200V
- High Efficiency MOSFET Circuitry (Except Regulator)
- High-Speed Switching Advantages Of Power MOSFETs
- Suitable For (Stand Alone) Single Supply Operation
- Low Thermal Impedance Packaging
- Electrically Isolated Heat-sinking
- Low Profile Mounting

DESCRIPTION

Adaptable, dual power driver incorporates high-current NMOS FET outputs. Each input drives an isolated N-channel FET rated for >10 amp loads. An internal regulator allows single supply operation for many applications. The regulator supports an external load limit of <50A, 12V, ±5%. These device provide power interface compatibility with standard logic and analog IC's. Both Industrial and Military specified types are available.

APPLICATIONS

- Relay and Solenoid Interface
- Lamp and Heater Control
- Motion Control and Power Conversion
- Low Profile Mounting

ELECTRICAL AND FUNCTIONAL CHARACTERISTICS

12V Single Supply Operating Voltage Range (Internal Regulator Compatibility)

Three Versions: (1) ..... 14V to 60V
(2) ..... 14V to 100V
(3) ..... 14V to 200V

MILITARY VERSION	INDUSTRIAL VERSION	RATED VOLTAGE	RATED OUTPUT CURRENT
OM9307SS	OM9307SP5	60V	20A
OM9308SS	OM9308SP5	100V	16A
OM9309SS	OM9309SP5	200V	10A

INPUT SIGNAL LEVELS

Logic 1 Input Voltage	3.0 V Minimum
Logic 0 Input Voltage	0.8 V Minimum
Input Current ($0 \le V_{in} \le V_S$)	-10 µA to 10 µA

TRUTH TABLE: Mixed Inverting/Non-Inverting

INPUT	OUTPUT 1	OUTPUT 2
LOW (0)	ON(Low)	OFF(High)
HIGH (1)	OFF(High)	ON(Low)

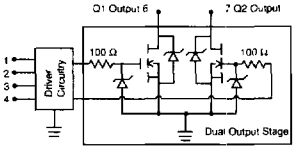
POWER OUTPUTS

CHARACTERISTIC	SYMBOL	PARAMETERS	UNITS
Output Leakage	I_{dss}	$V_{bb} = V_{max}$	≤250µA @ +25°C ≤1mA @ +125°C
Drain Source Breakdown	$V_{(BR)dss}$	I_{dss} = 250µA	60 V (min) 100 V (min) 200 V (min)
Output ON Resistance	R_{OUT}	I_{OUT} = 1A	0.06 Ω (60 V) 0.08 Ω (100 V) 0.21 Ω (200 V)
Output ON Voltage	V_{ON}	I_{OUT} = 14A I_{OUT} = 10A I_{OUT} = 6A	0.85 V (max - 60 V) 0.80 V (max - 100 V) 1.30 V (max - 200 V)

POWER SUPPLY

V_{in} = 3V, Reg_{out} = Open, $V_{bb} \le$ max	15 mA (max)
V_{in} = 0V, Reg_{out} = Open, $V_{bb} \le$ max	TBD (max)
I_{reg} = 40mA, V_{in} = 3 V, $V_{bb} \le$ max	V_{nom} ± 5% (12 V ± 5%)

Omnirel Internal Design Note: Maximum current @ +85°C and ≤30W.



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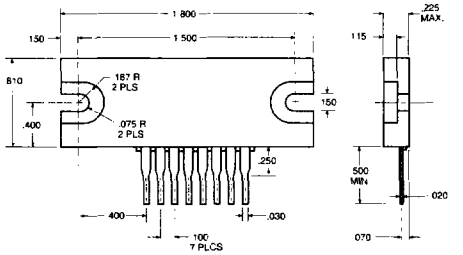
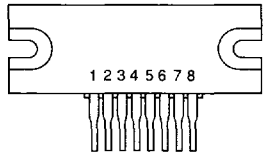
INDUSTRIAL APPLICATIONS

P-5 MECHANICAL OUTLINE



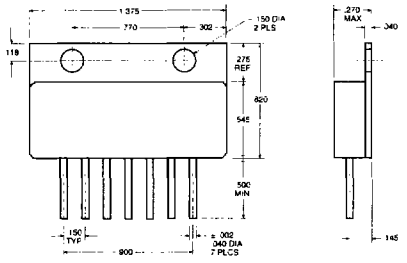
P-5 PIN CONNECTION



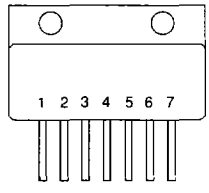
Pin 1: V_{CC}
Pin 2: V_{REF}
Pin 3: B_{IN}
Pin 4: A_{IN}
Pin 5: N/C
Pin 6: A_{OUT}
Pin 7: Ground
Pin 8: B_{OUT}

MILITARY APPLICATIONS

S-7 MECHANICAL OUTLINE



S-7 PIN CONNECTION



Pin 1: V_{CC}
Pin 2: V_{REF}
Pin 3: B_{IN}
Pin 4: A_{IN}
Pin 5: A_{OUT}
Pin 6: Ground
Pin 7: B_{OUT}