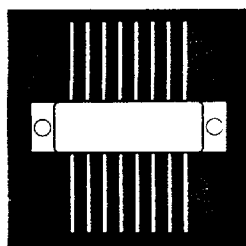


HERMETIC MOSFET POWER MODULE

OMNIREL CORP



**160 Watt Power Module, 100/60 Volt,
N-Channel MOSFETs With Power Schottky
Diodes And High Speed Rectifiers**

FEATURES

- Dual Inline 16 Pin Hermetic Power Package
- Low EMI Metal Package
- Isolated Heat Sink Design
- Individual N-Channel Power MOSFETS
- Blocking Schottky Diodes Internally Connected
- Flyback High Speed Rectifier With Uncommitted Anode Lead
- OM 803 Screening Available

T-39-27

DESCRIPTION

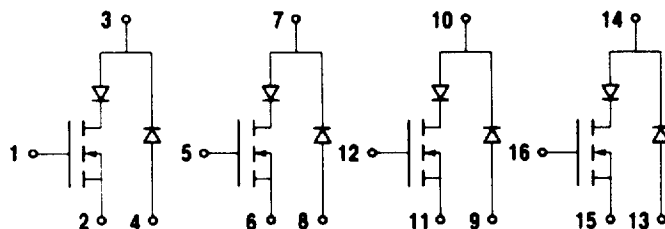
These hermetic power modules are ideally suited for many high-speed, high power switching applications such as switching power supplies and motor controls. This design utilizes four power MOSFETS, four high speed rectifiers and four Schottky diodes, connected for motor control and actuator applications.

5

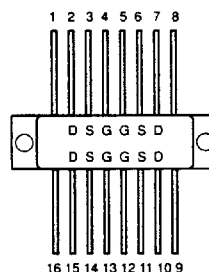
PRODUCT SUMMARY

PART NUMBER	POWER MOSFET			HIGH SPEED RECTIFIER		
	(Min) BV _{DSS}	(Max) V _{ONISAT1}	(Max) I _D	PIV	I _O	t _r
	Volts	Volts	Amps	Volts	Amps	nsec
OM9005SD	100	2.5	5	100	5	35
OM9006SD	60	2.5	5	100	5	35

SCHEMATIC



PIN CONNECTION



ABSOLUTE MAXIMUM RATINGS ($T_c = 25^\circ \text{C}$ unless otherwise noted)
MOSFET CIRCUIT (Per Channel)

T-39-27

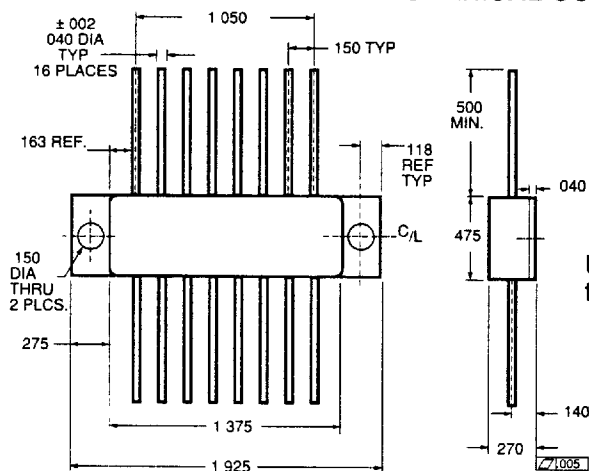
PARAMETER		RATING		UNITS
PART NUMBER		OM9005SD	OM9006SD	
V_{DS}	Drain-Source Voltage	100	60	V
V_{DGR}	Drain-Gate Voltage ($R_{GS} = 1 \text{ M}\Omega$)	100	60	V
$I_D @ T_c = 25^\circ \text{C}$	Continuous Drain Current	5	5	A
$I_D @ T_c = 100^\circ \text{C}$	Continuous Drain Current	5	5	A
I_{DM}	Pulsed Drain Current ¹	32	32	A
V_{GS}	Gate-Source Voltage	20	20	V
$P_c @ T_c = 25^\circ \text{C}$	Max. Power Dissipation	40	40	W
$P_c @ T_c = 100^\circ \text{C}$	Max. Power Dissipation	16	16	W
$R_{\theta JC}$	Thermal Resistance Junction to Case	3.5	3.5	$^\circ\text{C/W}$
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	45	45	$^\circ\text{C/W}$
T_J	Operating and Storage Temperature Range	-55 to +150	-55 to +150	$^\circ\text{C}$
T_{stg} Lead Temp.	(1/16" from case for 10 secs.)	300	300	$^\circ\text{C}$

NOTE: ¹Pulse Test Pulsewidth $\leq 300 \mu\text{sec}$, Duty Cycle $\leq 2\%$

OMNIREL CORP

HIGH SPEED RECTIFIER (Per Device)

PARAMETER		RATING		UNITS
PART NUMBER		OM9005SD	OM9006SD	
PIV	Peak Inverse Voltage	100	100	V
$V_{FM} @ 25^\circ \text{C}$	Maximum Forward Voltage ¹ @ 5A	.9	.9	V
$V_{FM} @ 100^\circ \text{C}$	Maximum Forward Voltage ¹ @ 5A	.85	.85	V
$I_{RM} @ 25^\circ \text{C}$	Max. Reverse Current @ PIV	10	10	μA
$I_{RM} @ 100^\circ \text{C}$	Max. Reverse Current @ PIV	150	150	μA
$R_{\theta JC}$	Thermal Resistance Junction to Case	6.0	6.0	$^\circ\text{C/W}$
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	45	45	$^\circ\text{C/W}$
t_{RRM}	Max Reverse Recovery Time ¹	35	35	nsec

NOTE: ¹Measured in circuit $I_F = 0.5 \text{ A}$, $I_R = 1 \text{ A}$, $I_{RR} = 0.25 \text{ A}$ **MECHANICAL OUTLINE**Unless otherwise specified, the general tolerance is ± 0.010 .

205 Crawford Street, Leominster, MA 01453 (508) 534-5776 FAX (508) 537-4246

5-20