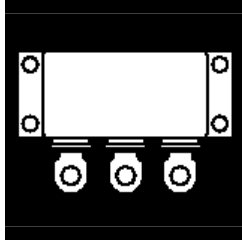


**Preliminary Data Sheet**OM6056SB OM6058SB OM6060SB  
OM6057SB OM6059SB OM6061SB**POWER MOSFETS IN A HERMETIC ISOLATED  
POWER BLOCK PACKAGE**

**High Current, High Voltage 100V Thru 1000V,  
Up To 190 Amp N-Channel, Size 7 MOSFETs**

**FEATURES**

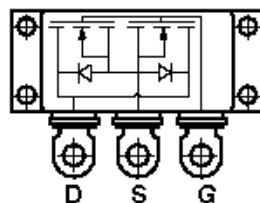
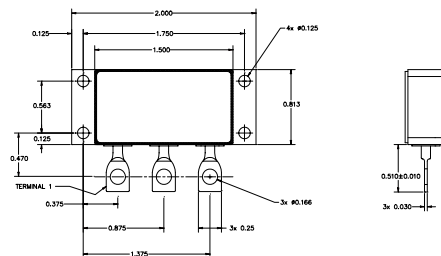
- Size 7 Die, High Energy
- Rugged Package Design
- Solder Terminals
- Very Low  $R_{DS(on)}$
- Fast Switching, Low Drive Current
- Available Screened To MIL-S-19500, TX, TXV And S Levels
- Ceramic Feedthroughs

**DESCRIPTION**

This series of hermetically packaged products feature the latest advanced MOSFET technology combined with a package designed specifically for high efficiency, high current applications. They are ideally suited for Hi-Rel requirements where small size, high performance and high reliability are required, and in applications such as switching power supplies, motor controls, inverters, choppers, audio amplifiers and high energy pulse circuits. This series also features avalanche high energy capability at elevated temperatures.

**MAXIMUM RATINGS @ 25°C**

PART NUMBER	$V_{DS}$	$R_{DS(on)}$	$I_D$ (Continuous)
OM6056SB	100 V	.008 $\Omega$	190 A
OM6057SB	200 V	.018 $\Omega$	105 A
OM6058SB	500 V	.095 $\Omega$	58 A
OM6059SB	600 V	.140 $\Omega$	48 A
OM6060SB	800 V	.300 $\Omega$	34 A
OM6061SB	1000 V	.500 $\Omega$	18 A

**3.1****PIN CONNECTION  
AND SCHEMATIC****MECHANICAL OUTLINE**

**OM6056SB - OM6061SB****ABSOLUTE MAXIMUM RATINGS** ( $T_C = 25^\circ\text{C}$  unless otherwise noted)

Parameter	Symbol	OM6056SB	OM6057SB	OM6058SB	OM6059SB	OM6060SB	OM6061SB	Unit
Drain Source Voltage	$V_{DS}$	100	200	500	600	800	1000	V
Drain Gate Voltage ( $R_{GS} = 1.0\text{ M}\Omega$ )	$V_{DGR}$	100	200	500	600	800	1000	V
Continuous Drain Current @ $T_C = 25^\circ\text{C}^2$	$I_D$	190	105	58	48	34	18	A
Continuous Drain Current @ $T_C = 100^\circ\text{C}^2$	$I_D$	82	44	25	19	15	7.5	A
Pulsed Drain Current <sup>1</sup>	$I_{DM}$	440	250	130	110	78	42	A
Max. Power Dissipation @ $T_C = 25^\circ\text{C}$	$P_D$	570						W
Max. Power Dissipation @ $T_C = 100^\circ\text{C}$	$P_D$	245						W
Linear Derating Factor Junction-to-Case		4.35						$W/^\circ\text{C}$
Linear Derating Factor Junction-to-Ambient		.033						$W/^\circ\text{C}$
Operating and Storage Temp. Range	$T_J, T_{stg}$	-55 to +150						$^\circ\text{C}$
Lead Temperature (1/16" from case for 10 sec.)		230						$^\circ\text{C}$

**Notes:** 1. **Pulse Test:** Pulse Width  $\leq 300\ \mu\text{sec}$ , Duty Cycle  $\leq 2\%$ . 2. **Package Pin Limitation:** 100 Amps @  $125^\circ\text{C}$ .

**THERMAL RESISTANCE (MAXIMUM)** @  $T_A = 25^\circ\text{C}$ 

Junction-to-Case	$R_{thJC}$	.23	$^\circ\text{C/W}$
Junction-to-Ambient (Free Air Operation)	$R_{thJA}$	30	$^\circ\text{C/W}$

**PRELIMINARY ELECTRICAL CHARACTERISTICS** ( $T_C = 25^\circ\text{C}$  unless otherwise noted)

Characteristic	Test Condition	Symbol	Part No.	Min.	Max.	Units
Gate Threshold Voltage	$V_{DS} = V_{GS}, I_D = 250\ \mu\text{A}$	$V_{GS(th)}$	All	2.0	4.0	V
Gate-Source Leakage Current	$V_{GS} = \pm 20\text{ V}_{DC}$	$I_{GSS}$	All		$\pm 100$	nA
Off State Drain-Source Leakage	$V_{DS} = V_{DSS} \times 0.8$ $V_{GS} = 0\text{V}$	$T_C = 25^\circ\text{C}$	$I_{DSS}$	All	10	$\mu\text{A}$
		$T_C = 125^\circ\text{C}$	$I_{DSS}$	All	.10	$\text{mA}$
Drain-Source Breakdown Voltage	$V_{GS} = 0\text{V}, I_D = 250\ \mu\text{A}$	$V_{DSS}$	OM6056SB	100		V
			OM6057SB	200		
			OM6058SB	500		
			OM6059SB	600		
			OM6060SB	800		
			OM6061SB	1000		
Static Drain-Source On-Resistance	$V_{GS} = 10\text{V}, I_D = I_{D25} \times 0.5$	$R_{DS(on)}$	OM6056SB		.008	$\Omega$
			OM6057SB		.018	
			OM6058SB		.095	
			OM6059SB		.140	
			OM6060SB		.300	
			OM6061SB		.500	

The above data is preliminary. Please contact factory for additional data and the dynamic and switching characteristics.