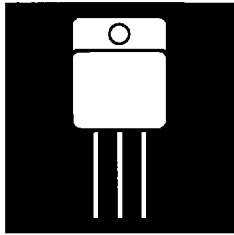


HIGH CURRENT MOSFET IN ISOLATED, TO-267 HERMETIC PACKAGE, SIZE 7 DIE, LOW $R_{DS(on)}$



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

FEATURES

- Isolated Hermetic Metal Package
- Size 7 Die, High Energy
- Fast Switching, Low Drive Current
- Ease Of Paralleling For Added Power
- Low $R_{DS(on)}$
- Available Screened To MIL-S-19500, TX, TXV And S Levels

DESCRIPTION

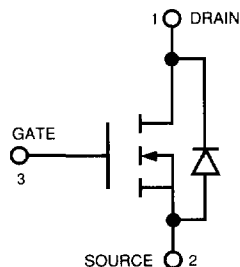
This series of hermetically packaged products feature the latest advanced MOSFET and packaging technology. They are ideally suited for Military requirements where small size, high performance and high reliability are required, and in applications such as switching power supplies, motor controls, inverters, choppers, audio amplifiers and high energy pulse circuits. This series also features avalanche high energy capability at elevated temperatures.

2.1

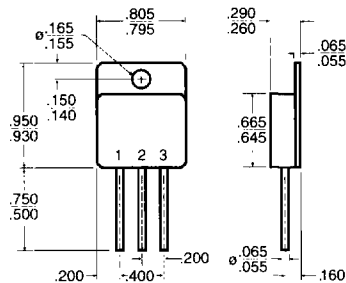
MAXIMUM RATINGS @ 25°C

PART NUMBER	V_{DS}	$R_{DS(on)}$	I_D (Continuous)
OM6050SJ	100 V	.014 Ω	100 A
OM6051SJ	200 V	.030 Ω	55 A
OM6052SJ	500 V	.160 Ω	30 A
OM6053SJ	600 V	.230 Ω	25 A
OM6054SJ	800 V	.500 Ω	18 A
OM6055SJ	1000 V	.800 Ω	10 A

SCHEMATIC



MECHANICAL OUTLINE



TO-267

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

Parameter	Symbol	OM6050SJ	OM6051SJ	OM6052SJ	OM6053SJ	OM6054SJ	OM6055SJ	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 @ $T_c = 25^\circ\text{C}$	I_D	100	55	30	25	18	10	A
Continuous Drain Current @ $T_c = 100^\circ\text{C}$	I_D	43	23	13	10	7	4	A
Pulsed Drain Current ¹	I_{DM}	235	135	80	75	50	30	A
Max. Power Dissipation @ $T_c = 25^\circ\text{C}$	P_D	280						W
Max. Power Dissipation @ $T_c = 100^\circ\text{C}$	P_D	110						W
Linear Derating Factor Junction-to-Case		2.22						W/ $^\circ\text{C}$
Linear Derating Factor Junction-to-Ambient		.025						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.)		275						$^\circ\text{C}$

Notes: 1. Pulse Test: Pulse Width $\leq 300 \mu\text{sec}$, Duty Cycle $\leq 2\%$. 2. Package Pin Limitation: 35 Amps.

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

Junction-to-Case	$R_{\theta JC}$.45	$^\circ\text{C/W}$
Junction-to-Ambient (Free Air Operation)	$R_{\theta JA}$	40	$^\circ\text{C/W}$

2.1

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	$V_{GS} = \pm 20 V_{DC}$	I_{GSS}	All		± 100	nA
Off State Drain-Source Leakage	$V_{DS} = V_{DSS} \times 0.8$ $V_{GS} = 0V$	$T_c = 25^\circ\text{C}$	I_{DSS}	All	10	μA
		$T_c = 125^\circ\text{C}$	I_{DSS}	All	.10	mA
Drain-Source Breakdown Voltage	$V_{GS} = 0V, I_D = 250 \mu\text{A}$	V_{DSS}	OM6050SJ	100		V
			OM6051SJ	200		
			OM6052SJ	500		
			OM6053SJ	600		
			OM6054SJ	800		
			OM6055SJ	1000		
Drain-Source Breakdown Voltage	$V_{GS} = 10V, I_D = I_{D25} \times 0.5$	$R_{DS(on)}$	OM6050SJ		.014	Ω
			OM6051SJ		.030	
			OM6052SJ		.160	
			OM6053SJ		.230	
			OM6054SJ		.500	
			OM6055SJ		.800	

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