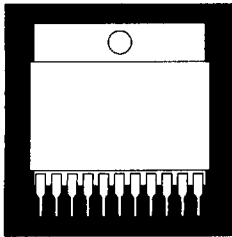


POWER MOSFETS IN 11-PIN INDUSTRIAL SIP PACKAGE



Complementary N-Channel and P-Channel Power MOSFETs In SIP Package

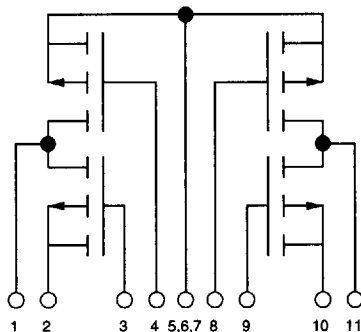
FEATURES

- Low $R_{DS(on)}$
- Fast Switching
- Small SIP Package
- "H" Bridge Configuration

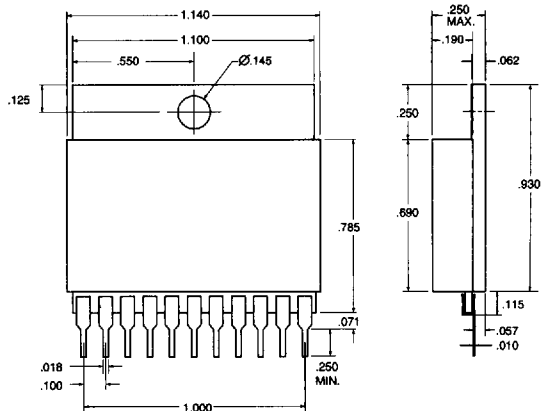
DESCRIPTION

This series of industrial packaged products features the latest advanced MOSFET and packaging technology. Ideally suited for harsh industrial environments where small size, high performance and reliability are required. Typical applications include motor control, inverters, choppers, amplifiers and high energy pulse circuits.

SCHEMATIC



MECHANICAL OUTLINE



2.1

FOR FURTHER INFORMATION, CONTACT FACTORY DIRECT OR YOUR LOCAL SALES REPRESENTATIVE.
This document contains information on a new product. Specifications and Information herein are subject to change without notice.

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ELECTRICAL CHARACTERISTICS: T = 25° unless otherwise noted.

Characteristic		Symbol	P-Channel				Units
			6421SP6		6422SP6		
			Min.	Max.	Min.	Max.	
Drain-Source Breakdown Voltage ($V_{GS} = 0, I_D = 0.25mA$)		$V_{(BR)DSS}$	50	-	100	-	V_{dc}
Zero Gate Voltage Drain Current ($V_{DS} = \text{Rated } V_{DSS}, V_{GS} = 0$) ($V_{DS} = \text{Rated } V_{DSS}, V_{GS} = 0, T_J = 85^{\circ}C$)		I_{DSS}	-	250 1000	-	250 1000	μA
Gate-Body Leakage Current, Forward ($V_{GSF} = \pm 20\text{ V}, V_{DS} = 0$)		I_{GSSF}	500	500	500	500	nA
Gate Threshold Voltage ($V_{DS} = V_{GS}, I_D = 250\mu A$)		$V_{GS(th)}$	2.0	4.0	2.0	4.0	V
Static Drain-Source-On-Resistance ($V_{GS} = 10V_{dc}, I_D = 3.5A_{dc}$)		$r_{DS(on)}$	-	.60	-	.60	Ω
Drain-Source-On-Voltage ($V_{GS} = 10V, I_D = 3.5A, T_C = 85^{\circ}C$)		$V_{DS(on)}$	-	3.5	-	3.5	V
Forward Transconductance ($V_{DS} = 10V, I_D = 3.5A$)		g_{FS}	.9	-	.9	-	mhos
Input Capacitance	$(V_{DS} = 25V,$ $V_{GS} = 0,$ $f = 1MHz)$	C_{iss}	-	450	-	450	pF
Output Capacitance		C_{oss}	-	350	-	350	pF
Reverse Transfer Capacitance		C_{rss}	-	100	-	100	pF
Turn-On Delay Time ($V_{DD} = 25V, I_D = 5A$)		$t_{d(on)}$	-	50	-	50	ns
Turn-Off Delay Time ($V_{DD} = 25V, I_D = 5A$)		$t_{d(off)}$	-	100	-	100	ns
Source Drain Diode Forward On Voltage $I_S = I_S$		V_{SD}	-	6.3	-	6.3	V

ELECTRICAL CHARACTERISTICS: T = 25° unless otherwise noted.

Characteristic	Symbol	N-Channel				Units
		6421SP6		6422SP6		
		Min.	Max.	Min.	Max.	
Drain-Source Breakdown Voltage ($V_{GS} = 0, I_D = 0.25mA$)	$V_{(BR)DSS}$	50	-	100	-	V_{dc}
Zero Gate Voltage Drain Current ($V_{DS} = \text{Rated } V_{DSS}, V_{GS} = 0$) ($V_{DS} = \text{Rated } V_{DSS}, V_{GS} = 0, T_J = 85^{\circ}C$)	I_{DSS}	-	250 1000	-	250 1000	μA
Gate-Body Leakage Current, Forward ($V_{GSF} = \pm 20V, V_{DS} = 0$)	I_{GSSF}	500	500	500	500	nA
Gate Threshold Voltage ($V_{DS} = V_{GS}, I_D = 250\mu A, T_J = 85^{\circ}C$)	$V_{GS(th)}$	2.0	4.0	2.0	4.0	V
Static Drain-Source-On-Resistance ($V_{GS} = 10V_{dc}, I_D = 3.5A_{dc}$)	$r_{DS(on)}$	-	.27	-	.27	Ω
Drain-Source-On-Voltage ($V_{GS} = 10V, I_D = 3.5A, T_C = 85^{\circ}C$)	$V_{DS(on)}$	-	1.9	-	1.9	V
Forward Transconductance ($V_{DS} = 10V, I_D = 3.5A$)	g_{FS}	2.7	-	2.7	-	mhos
Input Capacitance	$(V_{DS} = 25V, V_{GS} = 0, f = 1MHz)$	C_{iss}	600	-	600	pF
Output Capacitance		C_{oss}	400	-	400	pF
Reverse Transfer Capacitance		C_{rss}	100	-	100	pF
Turn-On Delay Time ($V_{DD} = 25V, I_D = 3.5A$)	$t_{d(on)}$	40	40	-	40	ns
Turn-Off Delay Time ($V_{DD} = 25V, I_D = 3.5A$)	$t_{d(off)}$	-	100	-	100	ns
Source Drain Diode Forward On Voltage $I_S = 5A$	V_{SD}	-	2.5	-	2.5	V