

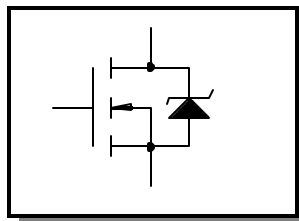


COMPOSITE MODULE INCORPORATED

SURFACE MOUNT MOS-PEP™ PACKAGING

CMI-7007-CHR Features:

- ▶ SMALL CASE SIZE
- ▶ SURFACE MOUNT
- ▶ HERMETIC PACKAGE
- ▶ LOW $R_{DS(on)}$
- ▶ FAST SWITCHING
- ▶ EASE OF PARALLELING FOR ADDED POWER



Description:

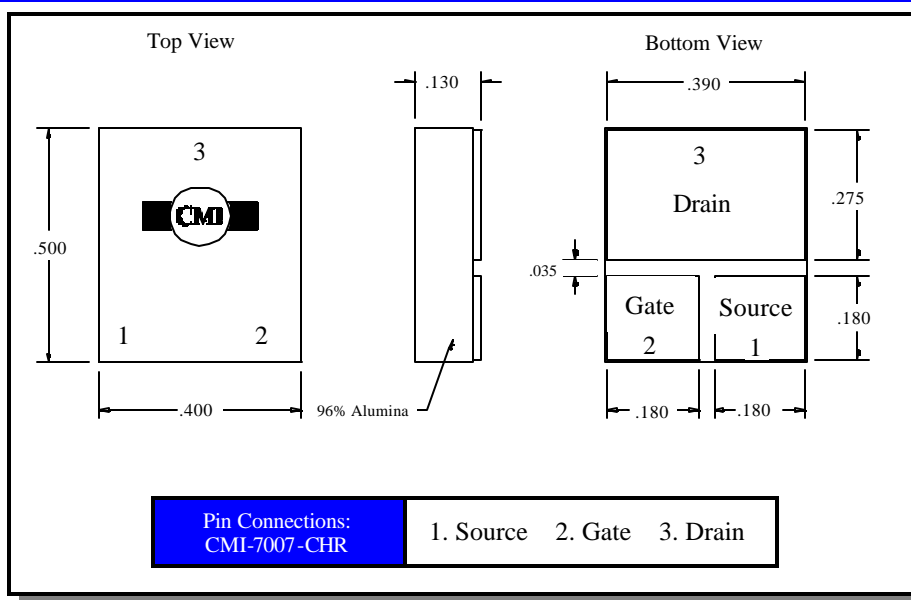
The CMI-7007-CHR is a packaged single N-channel MOSFET with a typical on-state resistance of $14m\Omega$. This hermetically sealed package features the latest advanced MOSFET and CMI PEP™ packaging technology. The small size and surface mount packaging allows for a high degree of flexibility. Typical applications include switching power supplies, motor controls, inverters, choppers, audio amplifiers, and high energy pulse circuits.

$$V_{DSS} = 70V$$

$$R_{DS(ON)} = .014W$$

$$I_D = 70A$$

PACKAGE DIMENSIONS: (Dimensions in inches)



61 Union St Attleboro Massachusetts 02703
Phone: (508)226-6969 - Fax: (508)226-0938 - E-mail: sales@cmodules.com

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Absolute Maximum Ratings

Drain to Source Voltage, V_{DS}	70V
Gate to Source Voltage, V_{GS}	$\pm 20V$
Continuous Drain Current, I_D , 25°C (Case)	70A
Pulsed Drain Current, I_{DM}	210A
Power Dissipation, P_D , 25°C (Case)	200W
Operating Temperature Range, T_J (Junction)	-55°C to +175°C
Thermal Resistance Junction to Case, θ_{JC}	0.75°C/W
Thermal Resistance Junction to Ambient, θ_{JA}	62°C/W
Storage Temperature Range, T_{SIG}	-55°C to +175°C
Lead Temperature, T_L , (.0625 from case for 10S)	300°C

ELECTRICAL SPECIFICATIONS: (To 25°C unless otherwise noted)

PARAMETER	SYMBOL	MIN	TYP.	MAX	UNITS	TEST CONDITIONS
Drain to Source Breakdown Voltage	BV_{DSS}	70	-	-	V	$V_{GS}=0V$, $I_D=250\mu A$
Static Drain to Source ON State Resistance	$R_{DS(on)}$	-	-	0.014	W	$V_{GS}=10V$, $I_D=35A$
Gate Threshold Voltage	$V_{GS(th)}$	2	-	4	V	$I_{DS}=250\mu A$
Forward Transconductance	qfs	30	-	-	S	$V_{DS}=25V$, $I_{DS}=35A$
Zero Gate Voltage Drain Current	I_{DSS}	-	-	25	μA	$V_{DS}=70V$, $V_{GS}=0V$
		-	-	250	μA	$V_{DS}=44V$, $V_{GS}=0V$, $T_J=150^\circ C$
Gate to Source Leakage Forward	I_{GSS}	-	-	100	nA	$V_{GS}=20V$
Gate to Source Leakage Reverse	I_{GSS}	-	-	-100	nA	$V_{GS}=-20V$
Input Capacitance	C_{ISS}	-	3800	-	pF	$V_{GS}=0V$ $V_{DS}=25V$
Output Capacitance	C_{OSS}	-	950	-	pF	
Reverse Transfer Capacitance	C_{RSS}	-	380	-	pF	

SOURCE-DRAIN DIODE CHARACTERISTICS:

Continuous Source Current	I_S	-	-	70	A	
Pulsed Source Current	I_{SM}	-	-	210	A	
Diode Forward Voltage	V_{SD}	-	-	1.3	V	$T_J=25^\circ C$, $I_S=35A$, $V_{GS}=0V$

Rev 001

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