CHENMKO ENTERPRISE CO.,LTD

Halogens free devices

CHM7400SGP

SURFACE MOUNT
N-Channel Enhancement Mode Field Effect Transistor

VOLTAGE 30 Volts CURRENT 2.8 Ampere

APPLICATION

* Servo motor control.
* Power MOSFET gate drivers.
* Other switching applications.

FEATURE

* Small flat package. (SC-88)
* Super high dense cell design for extremely low $R_{DS(ON)}$.
* High power and current handing capability.
* Lead free product is acquired.

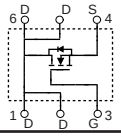
CONSTRUCTION

* N-Channel Enhancement

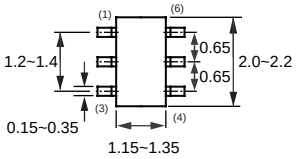
MARKING

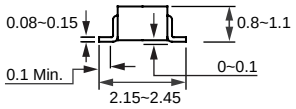
* 7400

CIRCUIT



SC-88/SOT-363





Dimensions in millimeters

SC-88/SOT-363

Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

Symbol	Parameter	CHM7400SGP	Units
V_{DSS}	Drain-Source Voltage	30	V
V_{GSS}	Gate-Source Voltage	±12	V
I_D	Maximum Drain Current - Continuous	2.8	A
	- Pulsed	10	
P_D	Maximum Power Dissipation	625	mW
T_J	Operating Temperature Range	-55 to 150	°C
T_{STG}	Storage Temperature Range	-55 to 150	°C

Thermal characteristics

$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient (Note 1)	250	°C/W

2007-10

RATING CHARACTERISTIC CURVES (CHM7400SGP)

Electrical Characteristics T_A = 25°C unless otherwise noted

Symbol	Parameter	Conditions	Min	Typ	Max	Units
OFF CHARACTERISTICS						
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS} = 0 V, I_D = 250 µA	30			V
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS} = 24 V, V_{GS} = 0 V			1	µA
I_{GSSF}	Gate-Body Leakage	V_{GS} = 12V,V_{DS} = 0 V			+100	nA
I_{GSSR}	Gate-Body Leakage	V_{GS} = -12V, V_{DS} = 0 V			-100	nA
ON CHARACTERISTICS						
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS} = V_{GS}, I_D = 250 µA	0.8		1.6	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	V_{GS}=10V, I_D=2.8A		62	77	mΩ
		V_{GS}=4.5V, I_D=2.3A		70	85	
SWITCHING CHARACTERISTICS						
Q_g	Total Gate Charge	V_{DS}=15V, I_D=2.0A V_{GS}=4.5V		4.2	6	nC
Q_{gs}	Gate-Source Charge			0.6		
Q_{gd}	Gate-Drain Charge			1.5		
t_{on}	Turn-On Time	V_{DD}= 15V V_{GS}= 10 V R_{GEN}= 10Ω, R_L= 10Ω		2.5		nS
t_r	Rise Time			2.5		
t_{off}	Turn-Off Time			20		
t_f	Fall Time			4		
DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS						
I_S	Drain-Source Diode Forward Current				2.5	A
V_{SD}	Drain-Source Diode Forward Voltage	I_S = 1.25A，V_{GS} = 0 V			1.2	V