CHENMKO ENTERPRISE CO.,LTD

Halogens free devices

SURFACE MOUNT
P-Channel Enhancement Mode Field Effect Transistor

VOLTAGE 20 Volts CURRENT 1 Ampere

CHM1305WGP

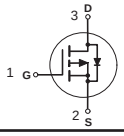
APPLICATION
* Power Management in Note book
* Portable Equipment
* Battery Powered System
* DC/DC Converter
* Load Switch
* DSC
* LCD Display inverter

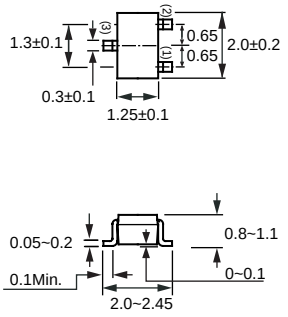
FEATURE
* Small surface mounting type. (SC-70/SOT-323)
* High density cell design for low $R_{DS(ON)}$.

CONSTRUCTION
* P-Channel Enhancement

SC-70/SOT-323

CIRCUIT





Dimensions in millimeters

SC-70/SOT-323

Absolute Maximum Ratings T_A = 25°C unless otherwise noted

Symbol	Parameter	CHM1305WGP	Units
V_{DSS}	Drain-Source Voltage	-20	V
V_{GSS}	Gate-Source Voltage	±12	V
I_D	Maximum Drain Current - Continuous	-1.0	A
	- Pulsed	-3	
I_S	Drain-Source Diose Forward Current	-0.28	A
P_D	Maximum Power Dissipation	330	mW
$T_{J,}T_{STG}$	Operating and Storage Temperature Range	-55 to 150	°C

Thermal characteristics

$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient	105	°C/W

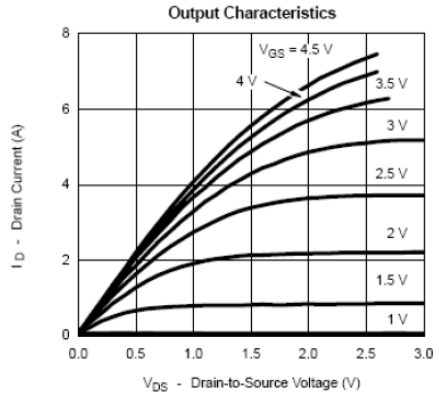
ELECTRICAL CHARACTERISTIC (CHM1305WGP)

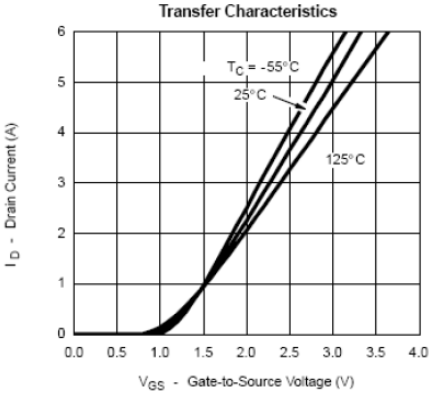
Electrical Characteristics T_A = 25°C unless otherwise noted

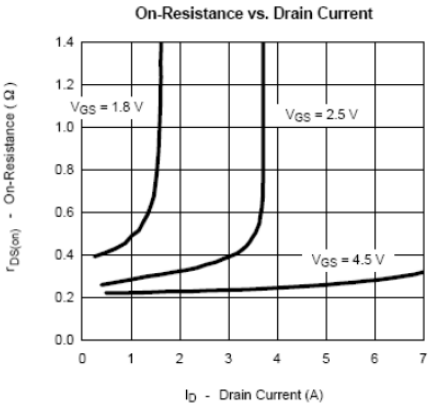
Symbol	Parameter	Conditions	Min	Typ	Max	Units
OFF CHARACTERISTICS						
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS} = 0 V, I_D = -250 μA	-20			V
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS} = -20 V, V_{GS} = 0 V			-1	μA
I_{GSS}	Gate-Body Leakage	V_{GS} = 12 V, V_{DS} = 0 V			+100	nA
I_{GSS}	Gate-Body Leakage	V_{GS} = -12 V, V_{DS} = 0 V			-100	nA
ON CHARACTERISTICS						
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS} = V_{GS}, I_D = -250 μA	-0.5		-1.2	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	V_{GS}=-4.5V, I_D=-0.95A		220	280	mΩ
		V_{GS}=-2.5V, I_D=-0.8A		300	380	
V_{SD}	Diose Forward Voltage	V_{GS} = 0V, I_S = -0.5 A		-0.8	-1.2	V
SWITCHING CHARACTERISTICS						
Q_g	Total Gate Charge	V_{DS}=-4V, I_D=-1A V_{GS}=-4.5V		3.0	4.2	nC
Q_{gs}	Gate-Source Charge			0.6		
Q_{gd}	Gate-Drain Charge			0.5		
t_{on}	Turn-On Time	V_{DD}= -4V I_D= -1.0A, V_{GEN}= -4.5 V R_{GEN}= 6 Ω		10	16	nS
t_r	Rise Time			40	60	
t_{off}	Turn-Off Time			18	25	
t_f	Fall Time			15	20	

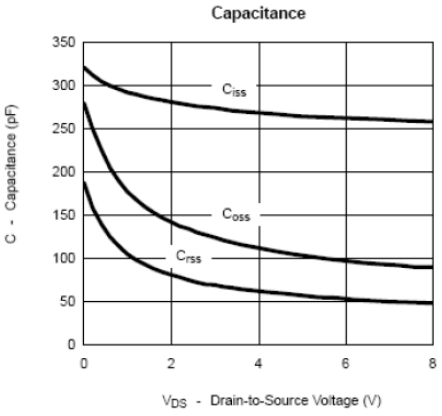
RATING CHARACTERISTIC CURVES (CHM1305WGP)

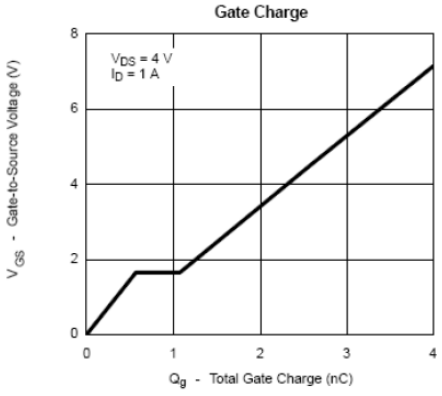
Typical Electrical Characteristics

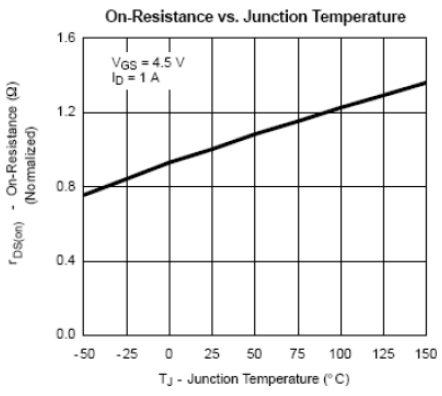












RATING CHARACTERISTIC CURVES (CHM1305WGP)