

Halogens free devices



CHENMKO ENTERPRISE CO.,LTD

**SURFACE MOUNT
P-Channel Enhancement Mode Field Effect Transistor**

VOLTAGE 20 Volts CURRENT 2.3 Ampere

CHM7407WGP

APPLICATION

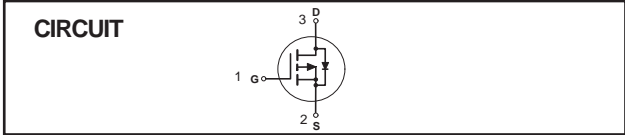
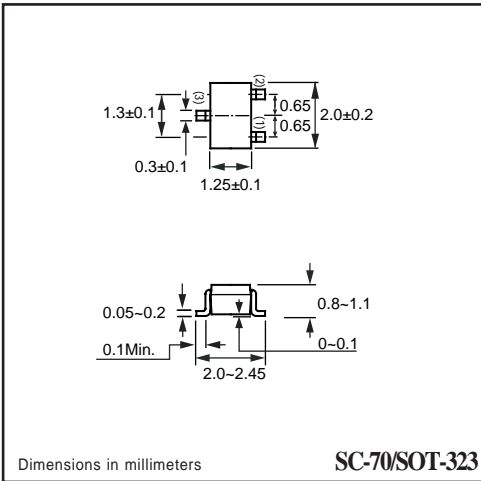
- * Power Management in Note book
- * Portable Equipment
- * Battery Powered System
- * DC/DC Converter
- * Load Switch
- * DSC
- * LCD Display inverter

FEATURE

- * Small surface mounting type. (SC-70/SOT-323)
- * High density cell design for low Rds(ON).

CONSTRUCTION

- * P-Channel Enhancement



Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	CHM7407WGP	Units
V_{DSS}	Drain-Source Voltage	-20	V
V_{GSS}	Gate-Source Voltage	± 12	V
I_D	Maximum Drain Current - Continuous	-2.3	A
	- Pulsed	-6	
I_S	Drain-Source Diode Forward Current	-1.4	A
P_D	Maximum Power Dissipation	330	mW
T_J, T_{STG}	Operating and Storage Temperature Range	-55 to 150	$^\circ\text{C}$

Thermal characteristics

$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient	105	$^\circ\text{C/W}$
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RATING CHARACTERISTIC CURVES (CHM7407WGP)

Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Conditions	Min	Typ	Max	Units
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OFF CHARACTERISTICS

BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS} = 0\text{ V}, I_D = -250\ \mu\text{A}$	-20			V
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS} = -20\text{ V}, V_{GS} = 0\text{ V}$			-1	μA
I_{GSS}	Gate-Body Leakage	$V_{GS} = 12\text{ V}, V_{DS} = 0\text{ V}$			+100	nA
I_{GSS}	Gate-Body Leakage	$V_{GS} = -12\text{ V}, V_{DS} = 0\text{ V}$			-100	nA

ON CHARACTERISTICS

$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS} = V_{GS}, I_D = -250\ \mu\text{A}$	-0.35		-0.89	V
$R_{DS(on)}$	Static Drain-Source On-Resistance	$V_{GS} = -4.5\text{ V}, I_D = -3.4\text{ A}$		90	100	$\text{m}\Omega$
		$V_{GS} = -2.5\text{ V}, I_D = -2.4\text{ A}$		115	125	
V_{SD}	Diode Forward Voltage	$V_{GS} = 0\text{ V}, I_S = -1.5\text{ A}$		-0.8	-1.2	V

SWITCHING CHARACTERISTICS

Q_g	Total Gate Charge	$V_{DS} = -6\text{ V}, I_D = -2.8\text{ A}$ $V_{GS} = -4.5\text{ V}$		4.8	8	nC
Q_{gs}	Gate-Source Charge			1.0		
Q_{gd}	Gate-Drain Charge			1.0		
t_{on}	Turn-On Time	$V_{DD} = -6\text{ V}$ $I_D = -1.0\text{ A}, V_{GEN} = -4.5\text{ V}$ $R_{GEN} = 6\ \Omega$		10	16	nS
t_r	Rise Time			13	23	
t_{off}	Turn-Off Time			18	25	
t_f	Fall Time			15	20	

RATING CHARACTERISTIC CURVES (CHM7407WGP)

Typical Electrical Characteristics

