



**CHENMKO ENTERPRISE CO.,LTD**

*Halogens free devices*

**SURFACE MOUNT**  
**N-Channel Enhancement Mode Field Effect Transistor**  
**VOLTAGE 60 Volts CURRENT 2 Ampere**

**CHM1273GP**

**APPLICATION**

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

**FEATURE**

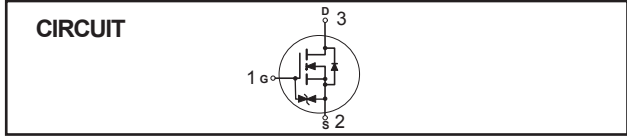
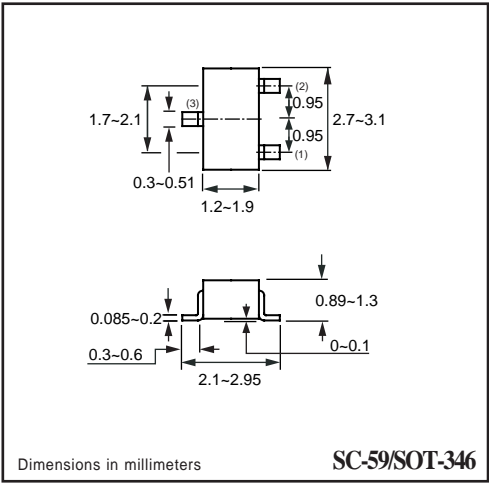
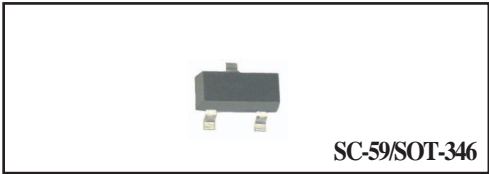
- \* Small surface mounting type. (SC-59)
- \* High density cell design for extremely low  $R_{DS(ON)}$ .
- \* Rugged and reliable.
- \* High saturation current capability.

**CONSTRUCTION**

- \* N-Channel Enhancement

**MARKING**

- \* 1273



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

Symbol	Parameter	CHM1273GP	Units
$V_{DSS}$	Drain-Source Voltage	60	V
$V_{GSS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Maximum Drain Current - Continuous	2	A
	- Pulsed (Note 3)	4	
$P_D$	Maximum Power Dissipation	0.5	W
$T_J$	Operating Temperature Range	-55 to 150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature Range	-55 to 150	$^\circ\text{C}$

Note : 1. Surface Mounted on FR4 Board ,  $t \leq 10\text{sec}$   
 2. Pulse Test , Pulse width  $\leq 300\mu\text{s}$  , Duty Cycle  $\leq 2\%$   
 3. Repetitive Rating , Pulse width limited by maximum junction temperature  
 4. Guaranteed by design , not subject to production testing

## RATING CHARACTERISTIC CURVES ( CHM1273GP )

**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	$V_{GS} = 0\text{ V}, I_D = 10\ \mu\text{A}$	60			V
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS} = 60\text{ V}, V_{GS} = 0\text{ V}$			10	$\mu\text{A}$
$I_{GSSF}$	Gate-Body Leakage	$V_{GS} = 20\text{ V}, V_{DS} = 0\text{ V}$			+10	$\mu\text{A}$
$I_{GSSR}$	Gate-Body Leakage	$V_{GS} = -20\text{ V}, V_{DS} = 0\text{ V}$			-10	$\mu\text{A}$

### ON CHARACTERISTICS (Note 2)

$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS} = 10\text{ V}, I_D = 1\text{ mA}$	1.0	1.7	2.5	V
$R_{DS(on)}$	Static Drain-Source On-Resistance	$V_{GS}=10\text{ V}, I_D=0.5\text{ A}$		0.24	0.65	$\Omega$
		$V_{GS}=4.0\text{ V}, I_D=0.5\text{ A}$		0.31	1.00	
$g_{FS}$	Forward Transconductance	$V_{DS} = 10\text{ V}, I_D = 0.5\text{ A}$	400			mS

### Dynamic Characteristics

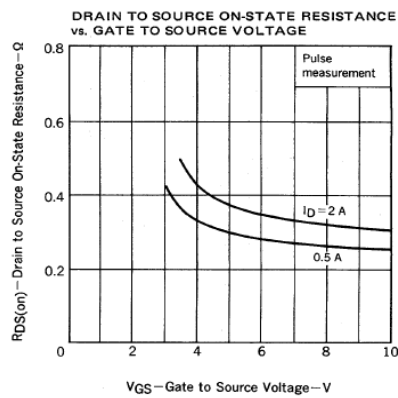
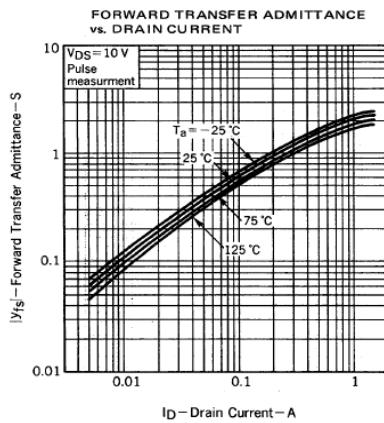
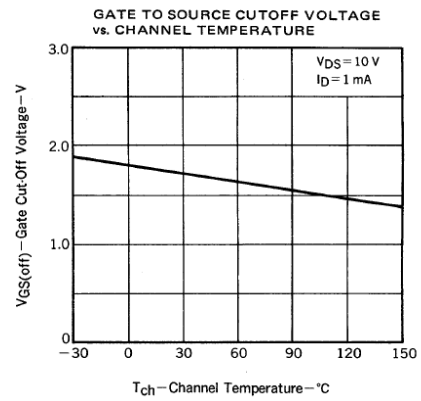
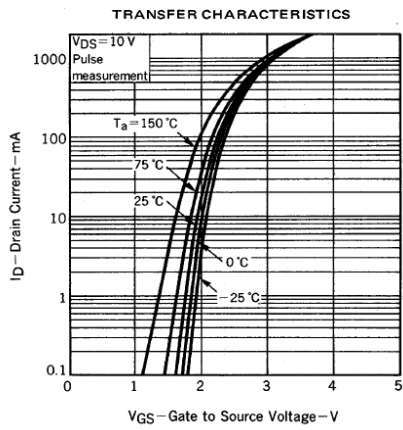
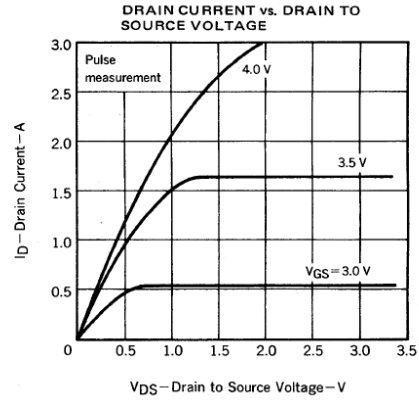
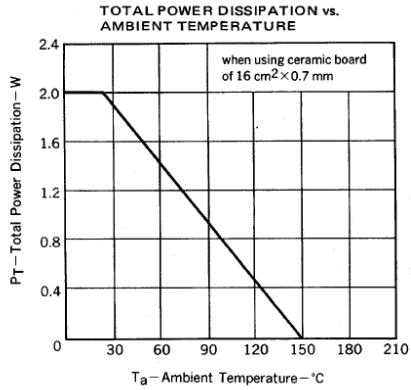
$g_{FS}$	Forward Transconductance	$V_{DS} = 10\text{ V}, I_D = 0.5\text{ A}$	400			mS
$C_{iss}$	Input Capacitance	$V_{DS} = 10\text{ V}, V_{GS} = 0\text{ V},$ $f = 1.0\text{ MHz}$		220		pF
$C_{oss}$	Output Capacitance			105		
$C_{rss}$	Reverse Transfer Capacitance			16		

### SWITCHING CHARACTERISTICS (Note 4)

$t_{on}$	Turn-On Time	$V_{DD} = 25\text{ V}$ $I_D = 0.5\text{ A}, V_{GS} = 10\text{ V}$ $R_{GEN} = 10\ \Omega, R_L = 50\ \Omega$		15		nS
$t_r$	Rise Time			35		
$t_{off}$	Turn-Off Time			380		
$t_f$	Fall Time			120		

# RATING CHARACTERISTIC CURVES ( CHM1273GP )

## Typical Electrical Characteristics



# RATING CHARACTERISTIC CURVES ( CHM1273GP )

