



**CHENMKO ENTERPRISE CO.,LTD**

Halogens free devices

**SURFACE MOUNT**

**N-Channel Enhancement Mode Field Effect Transistor**

VOLTAGE 30 Volts CURRENT 0.11 Ampere

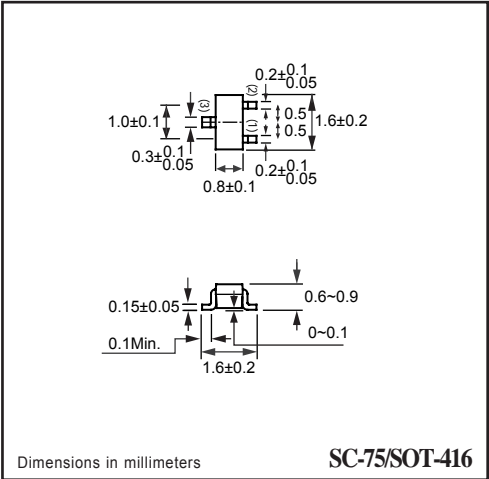
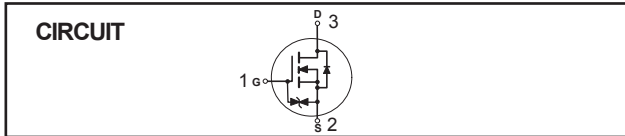
**CHM003TGP**

**FEATURE**

- \* Small surface mounting type. (SC-75/SOT-416)
- \* High density cell design for low  $R_{DS(ON)}$ .
- \* Suitable for high packing density.
- \* Rugged and reliable.
- \* High saturation current capability.
- \* Voltage controlled small signal switch.

**CONSTRUCTION**

- \* N-Channel Enhancement



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

Symbol	Parameter	CHM003TGP	Units
$V_{DSS}$	Drain-Source Voltage	30	V
$V_{GSS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Maximum Drain Current - Continuous (Note 1)	0.11	A
	- Pulsed (Note 2)	0.4	
$I_S$	Drain-Source Diode Forward Current	0.3	A
$P_D$	Maximum Power Dissipation	150	mW
$T_J, T_{STG}$	Operating and Storage Temperature Range	-55 to 150	$^\circ\text{C}$

Note : 1. Limited by maximum junction temperature.  
2. Limited by package.

**Thermal characteristics**

$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient	833	$^\circ\text{C/W}$
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## RATING CHARACTERISTIC CURVES ( CHM003TGP )

**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 <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> = 0 V, I <sub>D</sub> = 100 $\mu\text{A}$	30			V
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> = 24 V, V <sub>GS</sub> = 0 V			1	$\mu\text{A}$
I <sub>GSS</sub>	Gate-Body Leakage	V <sub>GS</sub> = 16 V, V <sub>DS</sub> = 0 V			+30	$\mu\text{A}$
I <sub>GSS</sub>	Gate-Body Leakage	V <sub>GS</sub> = -16 V, V <sub>DS</sub> = 0 V			-30	$\mu\text{A}$

### ON CHARACTERISTICS (Note 2)

V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = 100 $\mu\text{A}$	0.9		1.8	V
R <sub>DS(on)</sub>	Static Drain-Source On-Resistance	V <sub>GS</sub> =4.5V, I <sub>D</sub> =0.1A			6	$\Omega$
		V <sub>GS</sub> =2.5V, I <sub>D</sub> =0.01A			13	
V <sub>SD</sub>	Diode Forward Voltage	V <sub>DS</sub> = 0V, I <sub>S</sub> = 0.5A			1.3	V

### SWITCHING CHARACTERISTICS (Note 3)

C <sub>iss</sub>	Input Capacitance	V <sub>DS</sub> =15V, f=1MHz V <sub>GS</sub> =0V		40		$\mu\text{F}$
C <sub>oss</sub>	Output Capacitance			11		
C <sub>rss</sub>	Reverse Transfer Capacitance			6		
t <sub>on</sub>	Turn-On Time	V <sub>DD</sub> = 15V I <sub>D</sub> = 0.1A, V <sub>GEN</sub> =4 V R <sub>GEN</sub> = 6 $\Omega$		21		$\text{nS}$
t <sub>r</sub>	Rise Time			45		
t <sub>off</sub>	Turn-Off Time			86		
t <sub>f</sub>	Fall Time			88		

Note:  
Pulse Test: Pulse Width  $\leq$  300 $\mu\text{s}$ , Duty Cycle  $\leq$  2%.