

Dual Enhancement Mode MOSFET

APM2701CG

Features

N-Channel : $V_{DS}=20V$ $I_D=3A$

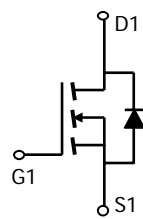
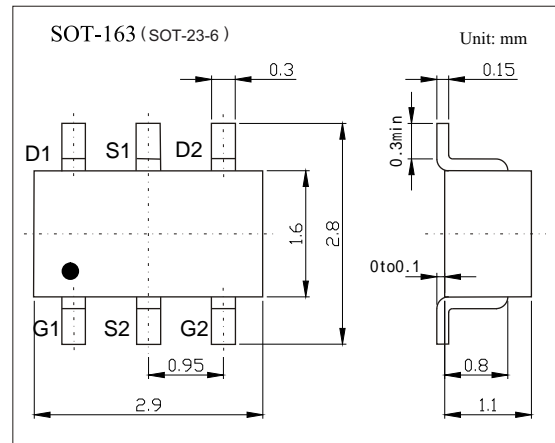
$R_{DS(ON)} < 70m \quad (V_{GS} = 4.5V)$

$R_{DS(ON)} < 110m \quad (V_{GS} = 2.5V)$

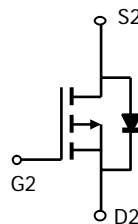
P-Channel : $V_{DS}=-20V$ $I_D=-1.5A$

$R_{DS(ON)} < 190m \quad (V_{GS} = -4.5V)$

$R_{DS(ON)} < 235m \quad (V_{GS} = -2.5V)$



n-channel



p-channel

Absolute Maximum Ratings $T_A = 25$

Parameter	Symbol	N-Channel	P-Channel	Unit
Drain-Source Voltage	V_{DS}	20	-20	V
Gate-Source Voltage	V_{GS}	± 10	± 10	
Continuous Drain Current	I_D	3	-1.5	A
Pulsed Drain Current	I_{DM}	10	-6	
Power Dissipation	PD	$T_A=25$		W
		$T_A=100$		
Diode Continuous Forward Current	I_S	1	-1	A
Thermal Resistance.Junction- to-Ambient	R_{thJA}	150		/W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 150		

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Electrical Characteristics Ta = 25

Parameter	Symbol	Testconditions	Type	Min	Typ	Max	Unit	
Drain-Source Breakdown Voltage	V _{DSS}	I _D =250 μA, V _{GS} =0V	N-CH	20			V	
		I _D =-250 μA, V _{GS} =0V	P-CH	-20				
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =16V, V _{GS} =0V	N-CH			1	μA	
		V _{DS} =-16V, V _{GS} =0V	P-CH			-1		
Gate-Body leakage current	I _{GSS}	V _{DS} =0V, V _{GS} = ± 10V	N-CH			± 100	nA	
		V _{DS} =0V, V _{GS} = ± 10V	P-CH			± 100		
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} I _D =250 μA	N-CH	0.45	0.6	1	V	
		V _{DS} =V _{GS} I _D =-250 μA	P-CH	-0.45	-0.6	-1		
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =4.5V, I _D =3A	N-CH		50	70	m	
		V _{GS} =2.5V, I _D =1.7A			90	110		
		V _{GS} =-4.5V, I _D =-1.5A	P-CH		145	190		
		V _{GS} =-2.5V, I _D =-1A			180	235		
Input Capacitance	C _{iss}	N-Channel:	N-CH		270		pF	
			P-CH		300			
Output Capacitance	C _{oss}	V _{GS} =0V, V _{DS} =10V, f=1MHz	N-CH		70			pF
		P-Channel:	P-CH		50			
Reverse Transfer Capacitance	C _{rss}	V _{GS} =0V, V _{DS} =-10V, f=1MHz	N-CH		50		pF	
			P-CH		30			
Total Gate Charge	Q _g	N-Channel:	N-CH		5	6.5	nC	
			P-CH		4	6		
Gate Source Charge	Q _{gs}	V _{GS} =4.5V, V _{DS} =10V, I _D =3A	N-CH		0.5			nC
		P-Channel:	P-CH		0.6			
Gate Drain Charge	Q _{gd}	V _{GS} =-4.5V, V _{DS} =-10V, I _D =-1.5A	N-CH		1.6		nC	
			P-CH		1			
Turn-On DelayTime	t _{d(on)}	N-Channel:	N-CH		6	12	ns	
			P-CH		6	10		
Turn-On Rise Time	t _r	V _{GS} =4.5V, V _{DS} =10V, I _D =1A, R _{GEN} =6 RL=10	N-CH		5	10		ns
		P-Channel:	P-CH		8	12		
Turn-Off DelayTime	t _{d(off)}	P-Channel: V _{GS} =-4.5V, V _{DS} =-10V, I _D =-1A, R _{GEN} =6 RL=10	N-CH		12	23	ns	
			P-CH		10	15		
Turn-Off Fall Time	t _f	P-Channel: V _{GS} =-4.5V, V _{DS} =-10V, I _D =-1A, R _{GEN} =6 RL=10	N-CH		6	12	ns	
			P-CH		5	10		
Diode Forward Voltage	V _{SD}	I _S =0.5A, V _{GS} =0V	N-CH		0.7	1.3	V	
		I _S =-0.5A, V _{GS} =0V	P-CH		-0.7	-1.3		

■ Marking

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