

GSM3112AXF

30V N-Channel MOSFET

Preliminary Specification

Absolute Maximum Ratings (T_J=25°C Unless otherwise specified)

Symbol	Parameter		Value	Unit
V _{DSS}	Drain-Source Voltage		30	V
V _{GSS}	Gate-Source Voltage		±20	V
I _D	Continuous Drain Current (Silicon Limited)	T _C =25°C	38	A
		T _C =100°C	24	
I _{DM}	Pulsed Drain Current ¹		110	A
I _{AS}	Single Pulse Avalanche Current, L = 0.1mH ²		15	A
E _{AS}	Single Pulse Avalanche Energy, L = 0.1mH ²		22.5	mJ
P _D	Power Dissipation	T _C =25°C	32	W
		T _C =100°C	12.5	
R _{θJC}	Thermal Resistance-Junction to Case		4	°C/W
R _{θJA}	Thermal Resistance-Junction to Ambient		62	°C/W
T _J	Operating Junction Temperature Range		-55 to +150	°C
T _{STG}	Storage Temperature Range		-55 to +150	°C

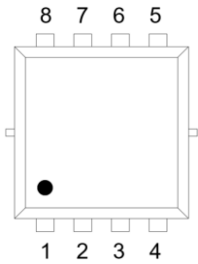
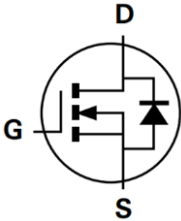
NOTE:

1. Single pulse width is limited by max junction temperature.

Electrical Characteristics (T_J=25°C Unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
Static						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =250uA	30			V
I _{DSS}	Drain-Source Leakage Current	V _{DS} =30V, V _{GS} =0V			1	uA
I _{GSS}	Gate-Source Leakage Current	V _{DS} =0V, V _{GS} =±20V			±100	nA
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =250uA	1.2		2.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V, I _D =20A		9.5	12	mΩ
		V _{GS} =4.5V, I _D =10A		13.5	18	
V _{SD}	Diode Forward Voltage	V _{GS} =0V, I _S =1A			1	V

Packages & Pin Assignments

DFN5X6-8L			Equivalent Circuit		
					
Pin	Symbol	Description	Pin	Symbol	Description
1	S	Source	8	D	Drain
2	S	Source	7	D	Drain
3	S	Source	6	D	Drain
4	G	Gate	5	D	Drain

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