

GSM4320TF

Preliminary Specification

40V N-Channel MOSFET

Absolute Maximum Ratings (T_A = 25°C unless otherwise specified)

Symbol	Parameter		Value	Unit
V _{DSS}	Drain-Source Voltage		40	V
V _{GSS}	Gate-Source Voltage		±20	V
I _D	Continuous Drain Current (Silicon Limited)	T _C =25°C	170	A
		T _C =100°C	108	
	Continuous Drain Current (Package Limited)		120	
I _{DM}	Pulsed Drain Current ¹		400	A
P _D	Power Dissipation	T _C =25°C	147	W
		T _C =100°C	58	
R _{θJC}	Thermal Resistance-Junction to Case		0.85	°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

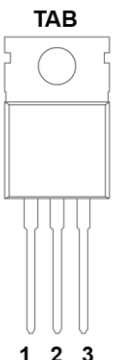
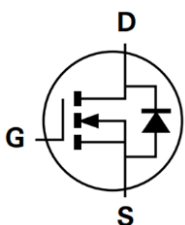
NOTE:

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

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

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Static Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =250μA	40	-	-	V
I _{DSS}	Drain-Source Leakage Current	V _{DS} =40V, V _{GS} =0V	-	-	1	μA
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 =250μA	1.2	-	2.5	V
R _{DS(ON)}	Drain-Source On-Resistance	V _{GS} =10V, I _D =20A	-	-	2.4	mΩ
		V _{GS} =4.5V, I _D =20A	-	-	3.8	
V _{SD}	Diode Forward Voltage	V _{GS} =0V, I _S =1A	-	-	1	V

Packages & Pin Assignments

TO-220-3L			Equivalent Circuit		
					
Pin	Symbol	Description	Pin	Symbol	Description
1	G	Gate	2	D	Drain
3	S	Source	TAB	D	Drain

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