

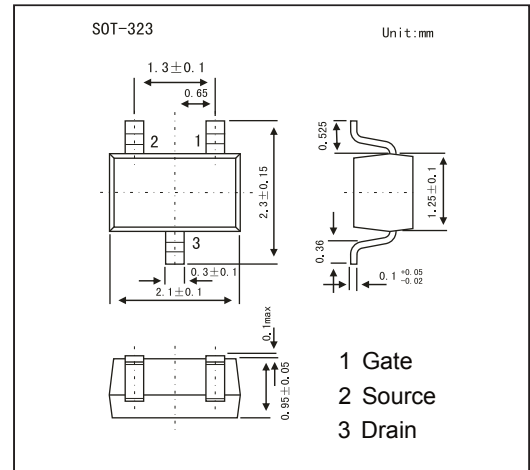
SOT-323 Plastic-Encapsulate MOSFETS

FEATURES

- High density cell design for extremely low RDS(on).
- Rugged and Reliable.
- Direct Logic-Level Interface: TTL/CMOS
- Drivers: Relays, Solenoids, Lamps, Hammers, Display, Memories, Transistors, etc.
- Solid-State Relays Battery Operated Systems

MECHANICAL DATA

- SOT-323 Small Outline Plastic Package.
- Epoxy UL: 94V-0.



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

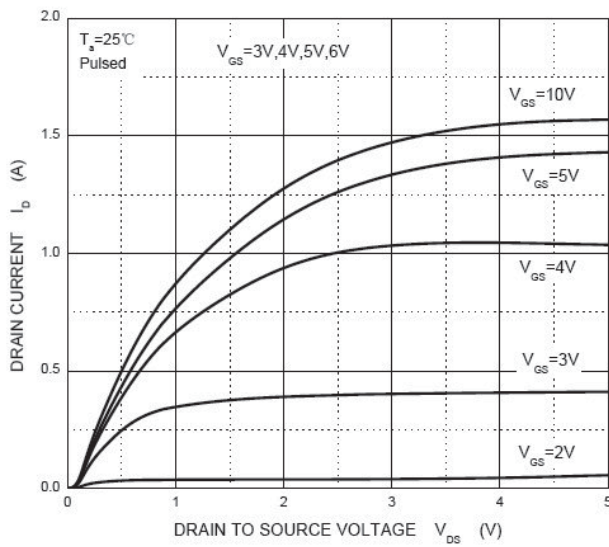
Parameters	Symbol	Value	Unit
Drain-Source Voltage	V _{DS}	50	V
Gate-Source Voltage	V _{GS}	±20	V
Continuous Drain Current	I _D	0.22	A
Power Dissipation	P _D	300	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-50-+150	°C
Thermal Resistance From Junction to Ambient	R _{θJA}	417	°C/W

Parameter	Symbols	Test Condition	Limits			Unit
			Min	Typ	Max	
Static						
Drain-Source Breakdown Voltage	V(BR) _{DSS}	V _{GS} =0V, I _D =250uA	50			V
Gate-Threshold voltage(note1)	V _{GS(th)}	V _{DS} =V _{GS} , I _D =1mA	0.8		1.5	V
Gate-body Leakage	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±100	nA
Zero Gate Voltage Drain current	I _{DSS}	V _{DS} =50V, V _{GS} =0V			0.5	uA
		V _{DS} =30V, V _{GS} =0V			0.1	
Drain-Source On-Resistance (note1)	R _{DS(ON)}	V _{GS} =10V, I _D =0.22A			3.5	Ω
		V _{GS} =4.5V, I _C =0.22A			6	
Forward trans conductance (note1)	g _{fs}	V _{DS} =10V, I _D =0.22A	0.12			S
Diode forward voltage(note1)	V _{SD}	I _S =0.44A, V _{GS} =0V			1.4	V
Dynamic(note2)						
Input capacitance	C _{iss}	V _{DS} =25V, V _{GS} =0V, f=1MHz		27		pF
Output capacitance	C _{oss}			13		
Reverse Transfer capacitance	C _{rss}			6		
Switching(note1,2)						
Turn-on Time	t _{d(on)}	V _{DD} =30V, R _{GEN} =6Ω, V _{GS} =10V, I _D =0.29A,			5	ns
Rise time	t _r				18	
Turn-off Time	t _{d(off)}				36	
Fall time	t _f				14	

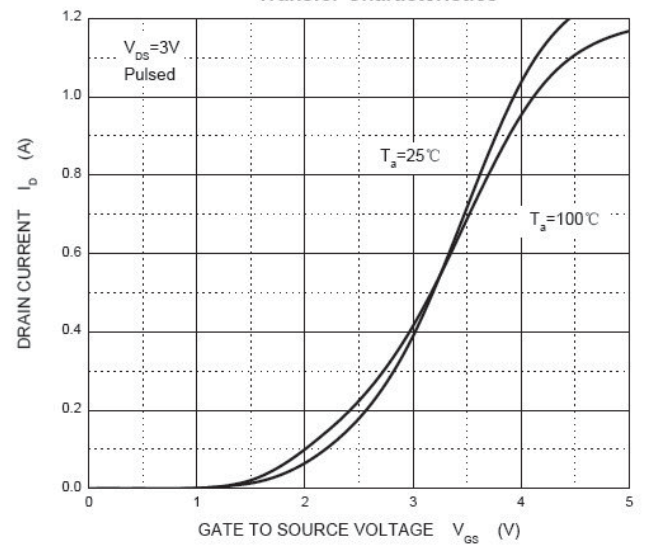
Notes: 1. Pulse Test: Pulse Width ≤300us, Duty Cycles≤2%.

RATINGS AND CHARACTERISTIC CURVES

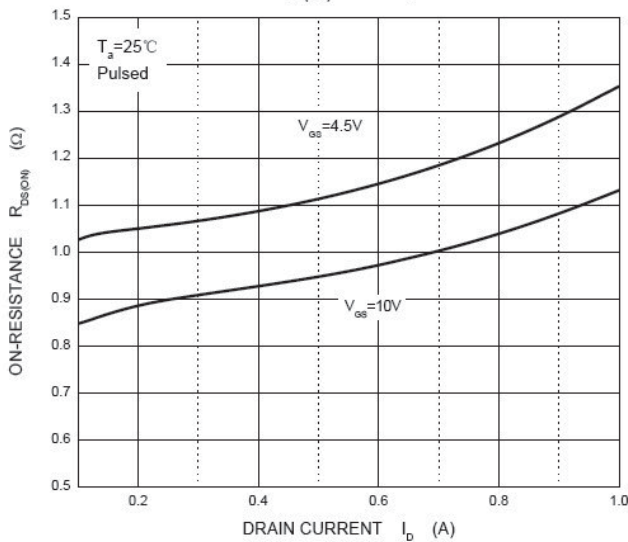
Output Characteristics



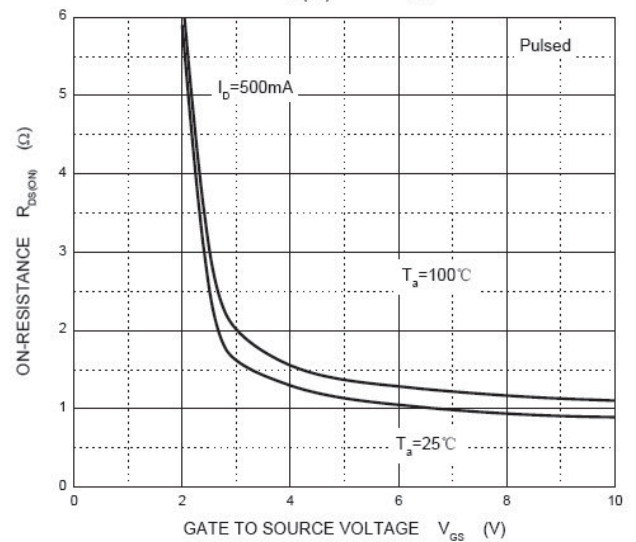
Transfer Characteristics



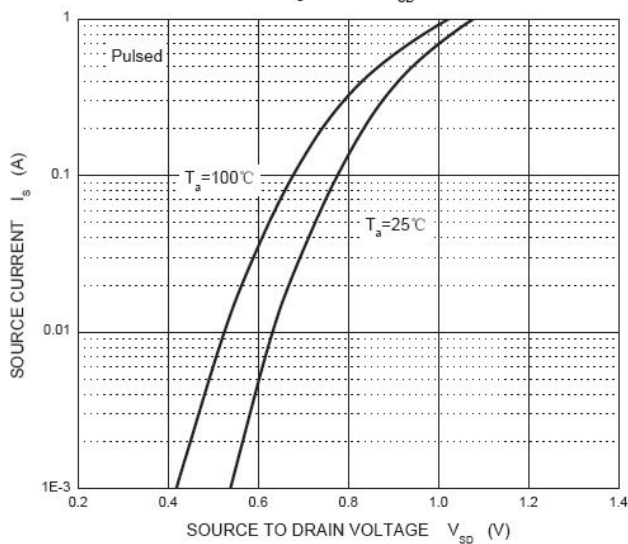
$R_{DS(ON)}$ — I_D



$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}



Threshold Voltage

