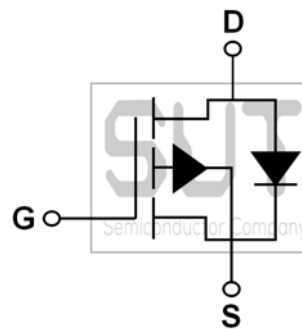
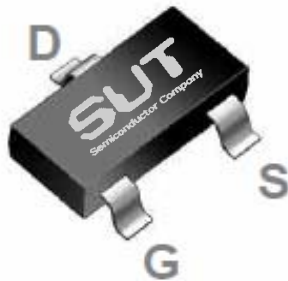


P-Channel 20-V_(D-S) MOSFET

PRODUCT SUMMARY		
B _{VDSS} (V)	R _{DS(on)} (mΩ)(MAX)	I _D (A)
-20	50@V _{GS} =-4.5V	-4.7

SOT23 Pin Configuration



ABSOLUTE MAXIMUM RATINGS(T_C=25°C UNLESS OTHERWISE NOTED)

Parameter	Symbol	Rating	Units
Drain-Source Voltage	V _{DS}	-20	V
Gate-Source Voltage	V _{GS}	±10	V
Drain Current-Continuous (T _C =25°C)	I _D	-4.7	A
Drain Current-Continuous (T _C =100°C)		-3.0	A
Drain Current-Pulsed ¹	I _{DM}	-18.8	A
Power Dissipation (T _C =25°C)	P _D	1.56	W
Power Dissipation-Derate above 25°C		0.012	W/°C
Storage Temperature Range	T _{STG}	-55 to 150	°C
Operating Junction Temperature Range	T _J	-55 to 150	°C

THERMAL CHARACTERISTICS

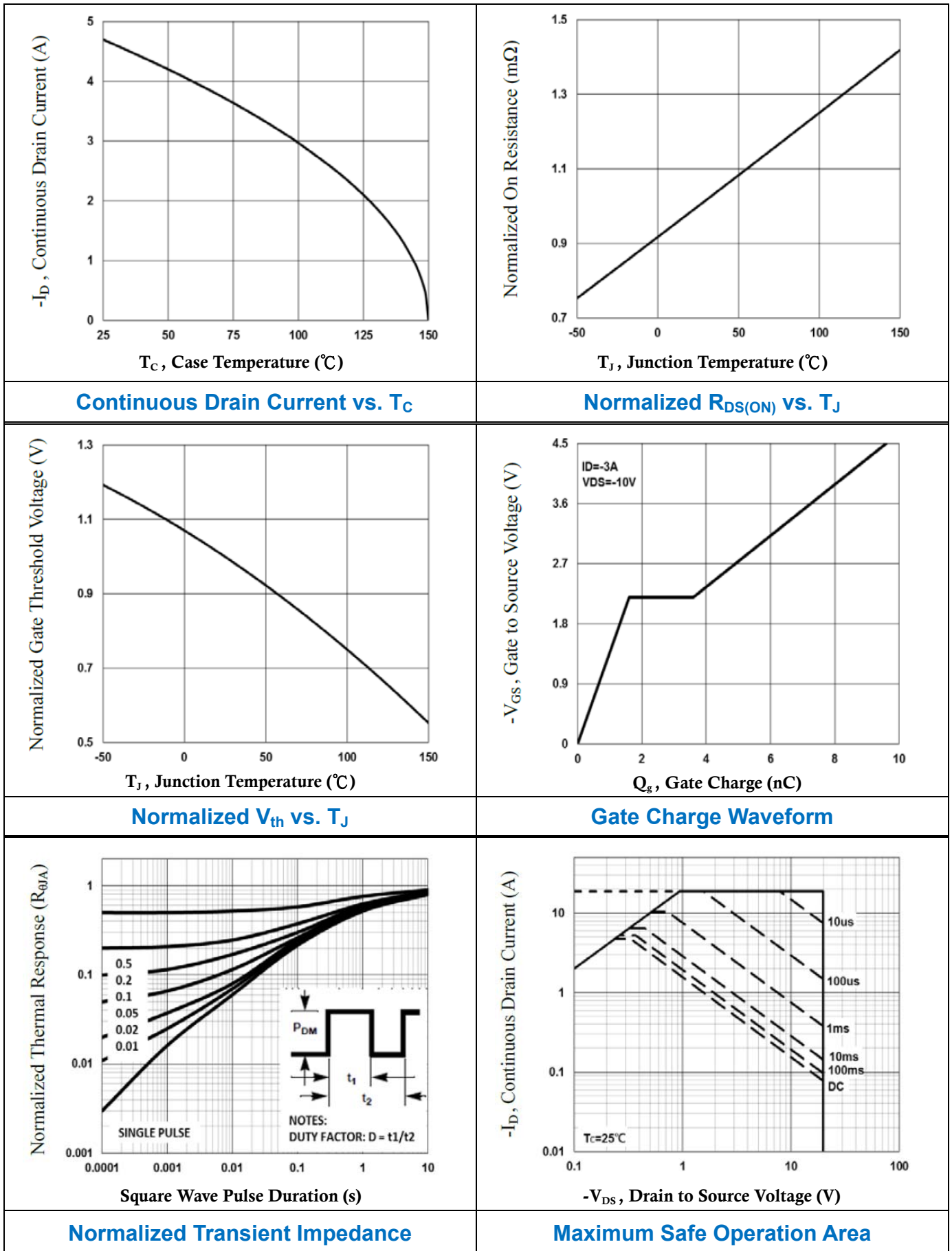
Parameter	Symbol	Typ.	Max.	Unit
Thermal Resistance Junction to ambient	R _{θJA}	---	80	°C/W

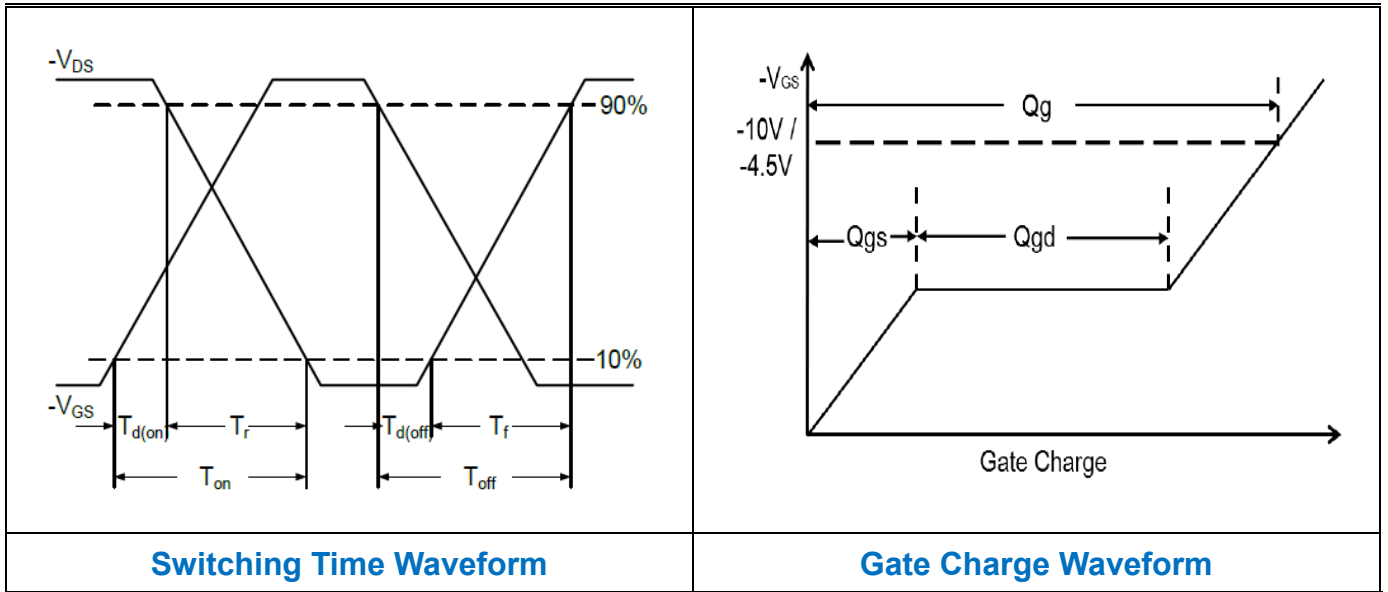
ELECTRICAL CHARACTERISTICS (T _J =25°C UNLESS OTHERWISE NOTED)						
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Off Characteristics						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0V, I _D =-250uA	-20	---	---	V
BV _{DSS} Temperature Coefficient	ΔBV _{DSS} /ΔT _J	Reference to 25°C, I _D =-1mA	---	-0.02	---	V/°C
Drain-Source Leakage Current	I _{DSS}	V _{GS} =0V, V _{DS} =-20V, T _J =25°C	---	---	-1	uA
		V _{GS} =0V, V _{DS} =-16V, T _J =125°C	---	---	-10	uA
Gate-Source Leakage Current	I _{GSS}	V _{GS} =±10V, V _{DS} =0V	---	---	±100	nA
On Characteristics						
Static Drain-Source On-Resistance	R _{DS(ON)}	V _{GS} =-4.5V, I _D =-3A	---	40	50	mΩ
		V _{GS} =-2.5V, I _D =-2A	---	54	65	mΩ
		V _{GS} =-1.8V, I _D =-1A	---	67	85	mΩ
Gate Threshold Voltage	V _{GS(th)}	V _{GS} =V _{DS} , I _D =-250uA	-0.3	-0.6	-0.8	V
V _{GS(th)} Temperature Coefficient	ΔV _{GS(th)}		---	2.0	---	mV/°C
Forward Transconductance	g _{fs}	V _{DS} =-10V, I _D =-3A	---	7.0	---	S
Dynamic and Switching Characteristics						
Total Gate Charge ^{2, 3}	Q _g	V _{GS} =-4.5V, V _{DS} =-10V, I _D =-3A	---	9.6	13	nC
Gate-Source Charge ^{2, 3}	Q _{gs}		---	1.6	2.0	
Gate-Drain Charge ^{2, 3}	Q _{gd}		---	2.0	4.0	
Turn-On Delay Time ^{2, 3}	T _{d(on)}	V _{GS} =-4.5V, V _{DD} =-10V, R _G =25Ω, I _D =-1A	---	6.0	11	ns
Rise Time ^{2, 3}	T _r		---	21.6	41	
Turn-Off Delay Time ^{2, 3}	T _{d(off)}		---	51	97	
Fall Time ^{2, 3}	T _f		---	13.8	26	
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =-10V, F=1MHz	---	850	1230	pF
Output Capacitance	C _{oss}		---	70	100	
Reverse Transfer Capacitance	C _{rss}		---	55	80	
Drain-Source Diode Characteristics and Maximum Ratings						
Continuous Source Current	I _S	V _G =V _D =0V, Force Current	---	---	-4.7	A
Pulsed Source Current	I _{SM}		---	---	-18.8	A
Diode Forward Voltage	V _{SD}	V _{GS} =0V, I _S =-1A, T _J =25°C	---	---	-1.0	V

Note :

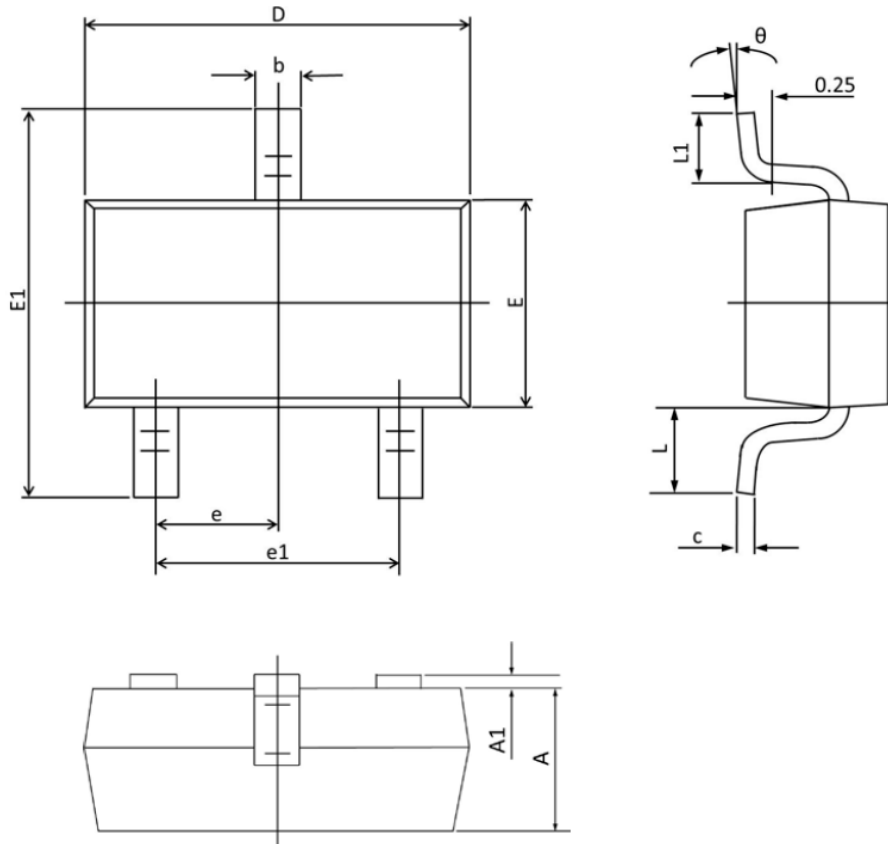
1. Repetitive Rating : Pulsed width limited by maximum junction temperature.
2. The data tested by pulsed , pulse width ≤ 300us , duty cycle ≤ 2%.
3. Essentially independent of operating temperature.

20V P-Channel MOSFETs





SOT23 PACKAGE INFORMATION



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MAX	MIN	MAX	MIN
A	1.000	0.900	0.039	0.035
A1	0.100	0.000	0.004	0.000
b	0.500	0.300	0.020	0.012
c	0.110	0.090	0.004	0.003
D	3.000	2.800	0.118	0.110
E	1.400	1.200	0.055	0.047
E1	2.550	2.250	0.100	0.089
e	0.950(TYP)		0.037(TYP)	
e1	2.000	1.800	0.079	0.071
L	0.550(REF)		0.022(REF)	
L1	0.500	0.300	0.020	0.012
θ	7°	1°	7°	1°