

Descriptions

This is P- CHANNEL MOSFET in a SOT23 -3 Plastic Package.

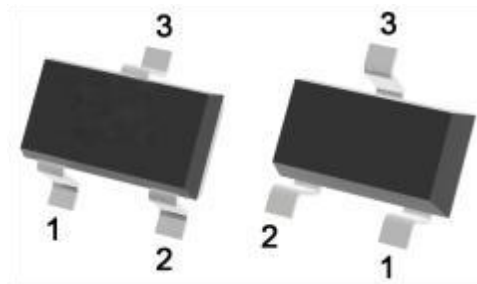
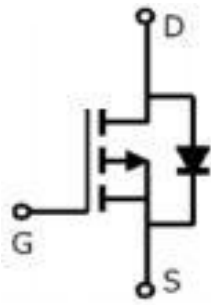
Features

- $V_{DS}=-60V$; $I_D=-3A$
- $R_{DS(on)1}@-10V \leq 100m\ \Omega$ (Type.83m Ω)
- $R_{DS(on)2}@-4.5V \leq 130m\ \Omega$ (Type.100m Ω)
- HF Product

Applications

PWM application & Load switch.

Equivalent Circuit & Pinning



PIN1 : G

PIN 2 : S

PIN 3 : D

Marking

See Marking Instructions.

Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V _{DSS}	-60	V
Gate-Body Leakage Voltage	V _{GSS}	±20	V
Drain Current – Continuous	I _D	-3	A
Pulsed Drain Current	I _{DM}	-16	A
Power Dissipation	P _D	1.4	W
Operating and Storage Temperature Range	T _J , T _{STG}	-55~150	°C
Maximum Junction-to-Ambient	R _{θJA}	89	°C/W

Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V I _D =-250μA	-60	-65		V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} I _D =-250μA	-1	-1.6	-2.5	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =-10V I _D =-2A		83	100	mΩ
		V _{GS} =-4.5V I _D =-1A		100	130	mΩ
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-60V V _{GS} =0V			-1.0	μA
Gate-Body leakage current	I _{GSS}	V _{GS} =±20V V _{DS} =0V			±100	nA
Drain-Source Diode Forward Voltage	V _{SD}	V _{GS} =0V T _J =25°C I _S =-1A			-1.2	V
Gate resistance	R _g	f=1MHz		6.5		Ω
Input Capacitance	C _{iss}	V _{DS} =-25V V _{GS} =0V f=1.0MHz		890		pF
Output Capacitance	C _{oss}			90		
Reverse Transfer Capacitance	C _{rss}			64		
Total Gate Charge	Q _{g(-10V)}	V _{DS} =-10V V _{GS} =-10.0V I _D =-3A		12.3		nC
Total Gate Charge	Q _{g(-4.5V)}			6.3		
Gate-to-Source Charge	Q _{gs}			1.6		
Gate-to-Drain Charge	Q _{gd}			2.4		
Turn-On Delay Time	t _{d(on)}	V _{DS} =-10V V _{GS} =-10V R _L =5.4Ω R _{GEN} =3Ω		12		ns
Turn-On Rise Time	t _r			20		
Turn-Off Delay Time	t _{d(off)}			20		
Turn-Off Fall Time	t _f			25		

Electrical Characteristic Curve

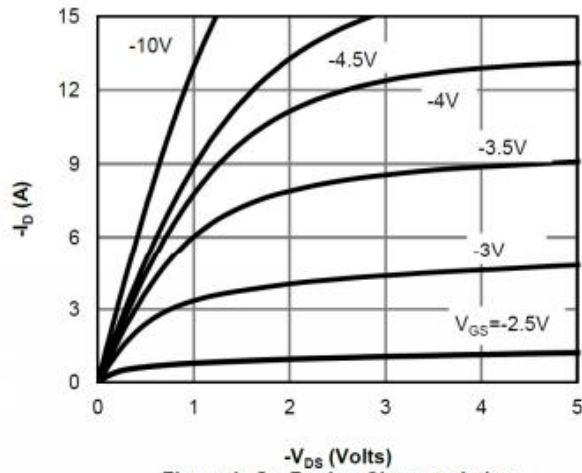


Figure 1: On-Region Characteristics

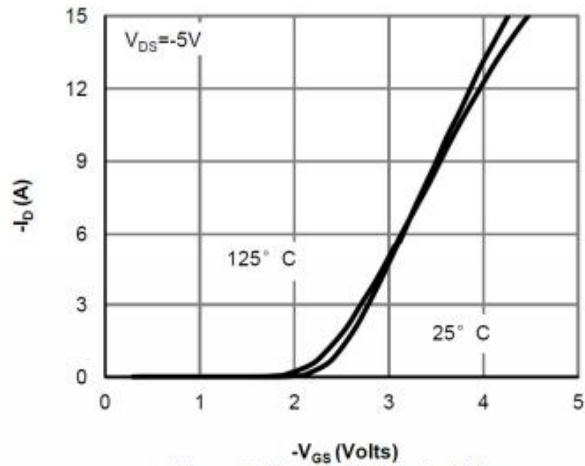


Figure 2: Transfer Characteristics

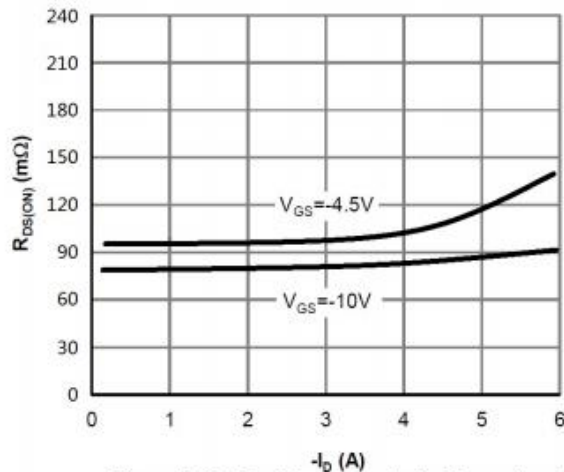


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

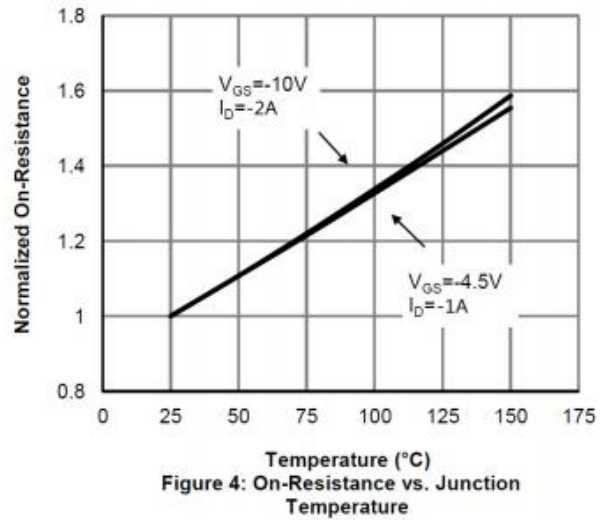


Figure 4: On-Resistance vs. Junction Temperature

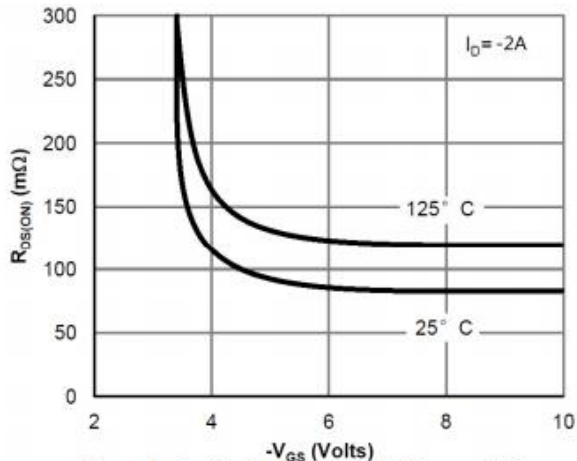


Figure 5: On-Resistance vs. Gate-Source Voltage

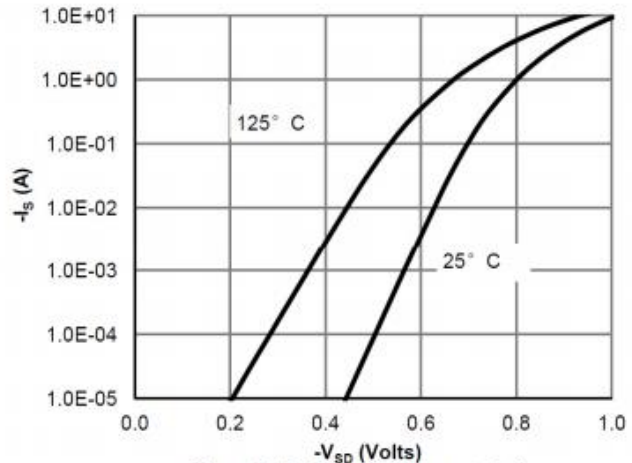


Figure 6: Body-Diode Characteristics

Electrical Characteristic Curve

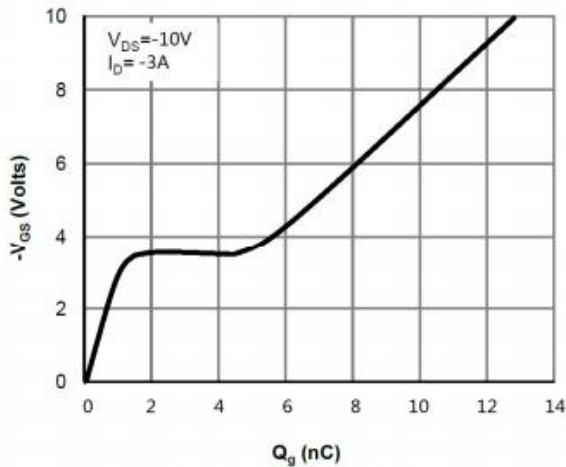


Figure 7: Gate-Charge Characteristics

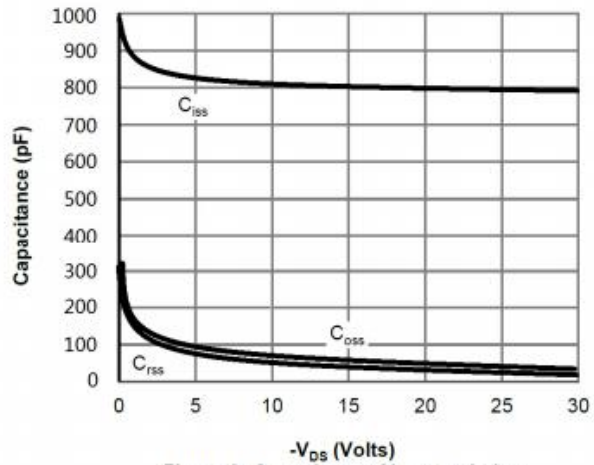


Figure 8: Capacitance Characteristics

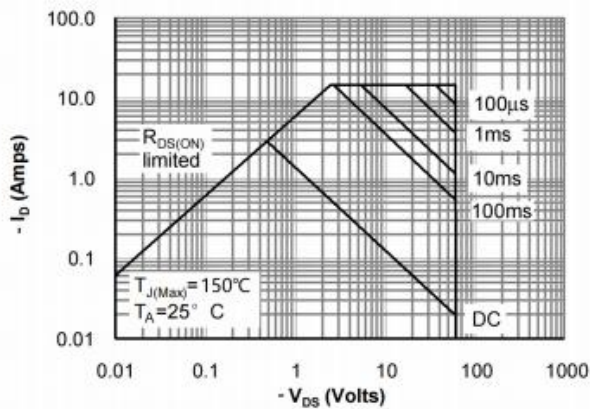


Figure 9: Maximum Forward Biased Safe Operating Area

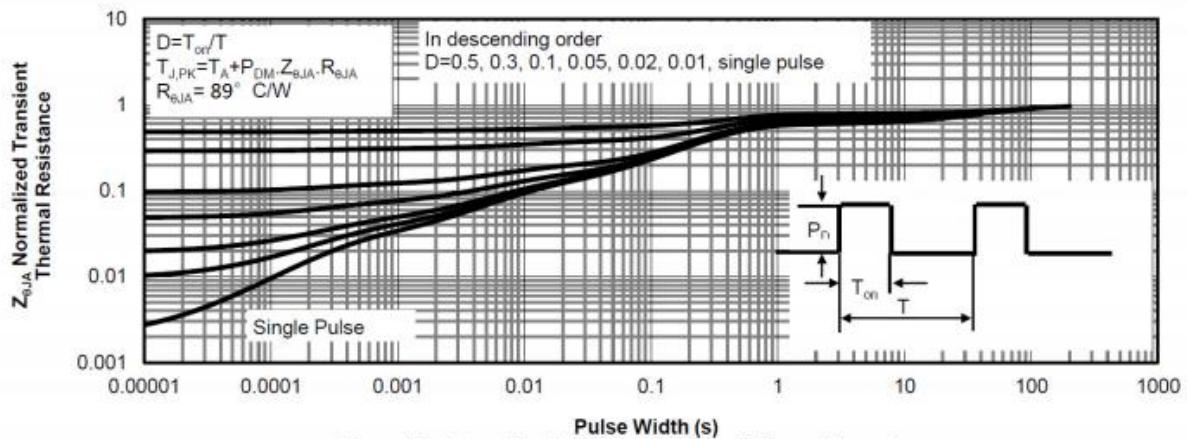
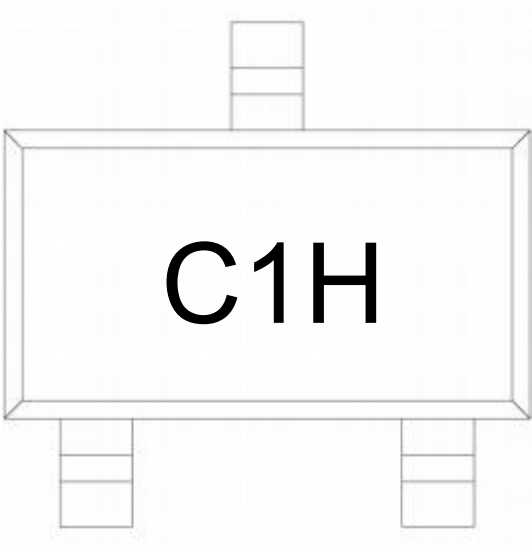


Figure 10: Normalized Maximum Transient Thermal Impedance

Marking Instructions



Note:
H: Company Code
C1: Product Type Code

Packaging SPEC

REEL

Package Type	Units					Dimension (unit: mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOT23-3	3,000	10	30,000	4	120,000	7" ×8	210×205×205	445×435×230

Package Outline Dimensions

