

Descriptions

This 100V 170mA N-Channel MOSFET in a SOT-23 Plastic Package.

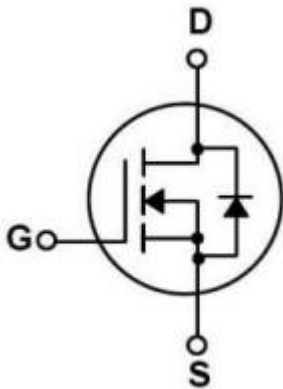
Features

- High density cell design for extremely low RDS(ON)
- Halogen Free Product

Applications

This device is suitable for use as a load switch or in PWM applications.

Equivalent Circuit



Pinning



PIN1: Gate PIN 2: Source PIN 3: Drain

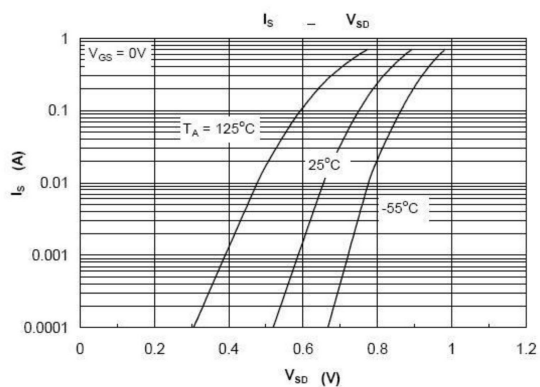
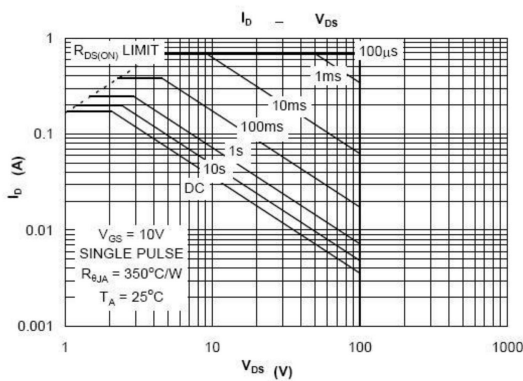
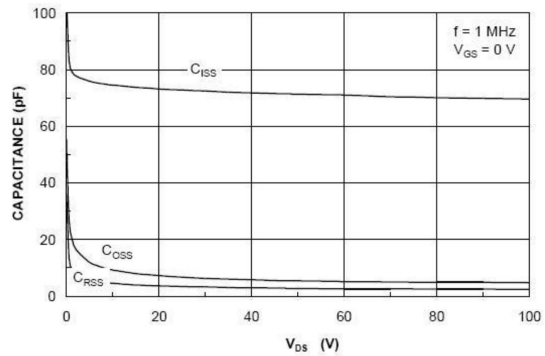
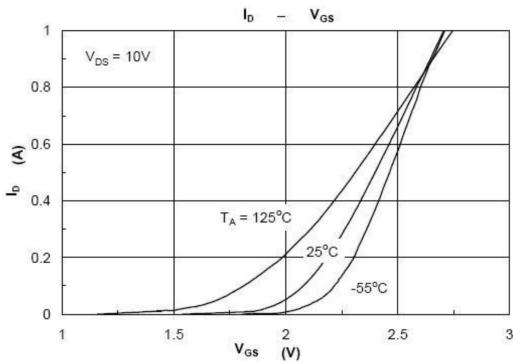
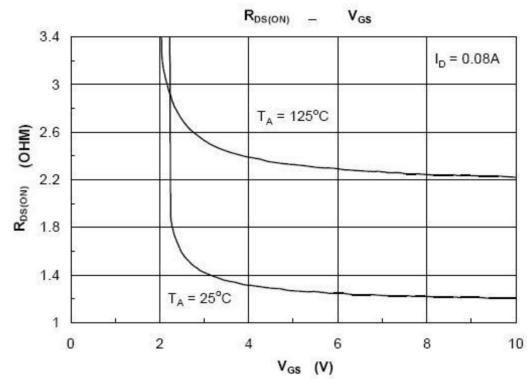
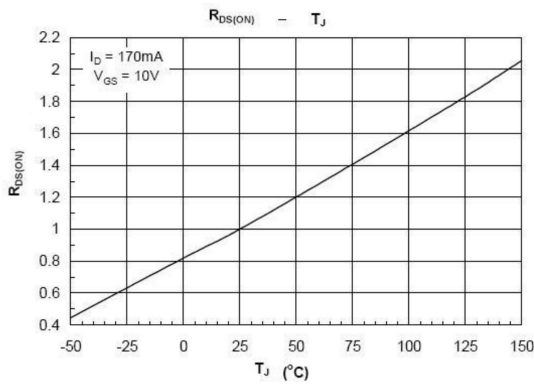
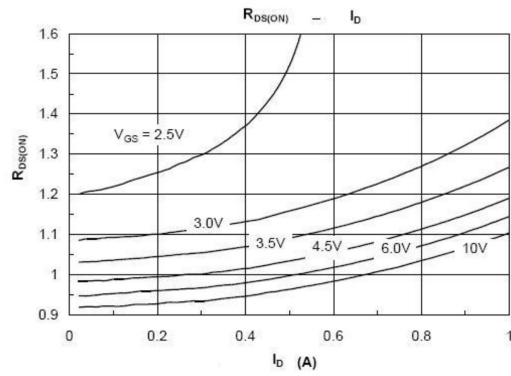
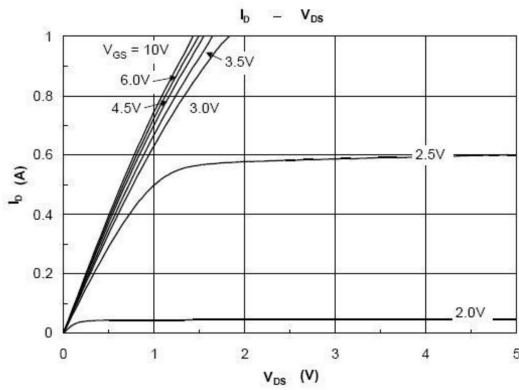
Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V _{DSS}	100	V
Drain Current – Continuous	I _D	170	mA
Drain Current– Pulsed	I _D (T _C =25°C)	680	mA
Continuous Drain–Source	I _S	170	mA
Gate-Source Voltage	V _{GS}	±20	V
Power Dissipation	P _D	0.36	W
Thermal Resistance, Junction-to-Ambient	R _{θJA}	350	°C/W
Operating and Storage Junction Temperature Range	T _J , T _{STG}	-55 to 150	°C

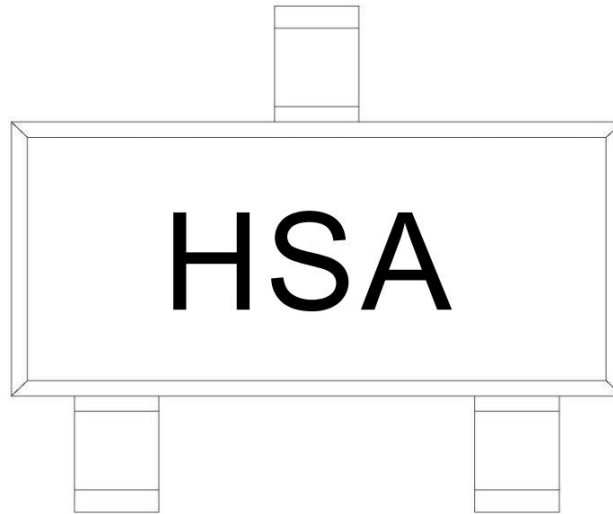
Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	BV _{DSS}	V _{GS} =0V I _D =250μA	100			V
Zero Gate Voltage Drain Current	I _{DSS(1)}	V _{DS} =100V V _{GS} =0V			1.0	μA
	I _{DSS(2)}	V _{DS} =100V V _{GS} =0V T _J =125°C			60	μA
	I _{DSS(3)}	V _{DS} =20V V _{GS} =0V			10	nA
Gate–Body Leakage.	I _{GSS}	V _{GS} =±20 V _{DS} =0V			±50	nA
On–State Drain Current	I _{D(on)}	V _{DS} =5.0V V _{GS} =10V	0.68			A
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} I _D =1.0mA	0.8	1.7	2.0	V
Static Drain–Source On–Resistance	R _{DS(on)(1)}	V _{GS} =10V I _D =0.17A		1.2	6.0	Ω
	R _{DS(on)(2)}	V _{GS} =4.5V I _D =0.17A		1.3	10	Ω
	R _{DS(on)(3)}	V _{GS} =10V I _D =0.17A T _J =125°C		2.2	12	Ω
Forward Transconductance	g _{FS}	V _{DS} =10V I _D =0.17A	0.08	0.8		S
Drain–Source Diode Forward Voltage	V _{SD}	V _{GS} =0V I _S =0.34A		0.8	1.3	V
Input Capacitance	C _{iss}	V _{DS} =25V V _{GS} =0V f=1.0MHz		73		pF
Output Capacitance	C _{oss}			7		pF
Reverse Transfer Capacitance	C _{rss}			3.4		pF
Turn–On Delay Time	t _{d(on)}	I _D =0.28A V _{GS} =10V V _{DD} =30V R _G =6.0Ω		1.7	3.4	ns
Turn–On Rise Time	t _r			9	18	ns
Turn–Off Delay Time	t _{d(off)}			17	31	ns
Turn–Off Fall Time	t _f			2.4	5.0	ns

Electrical Characteristic Curve



Marking Instructions



Note:

H: Halogen Free

SA: Product Type.

Packaging SPEC

REEL INFORMATION

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
SOT-23	3,000	10	30,000	6	180,000	7" x8	180x120x180	390x385x205

Package Outline Dimensions

SOT-23

单位: mm

