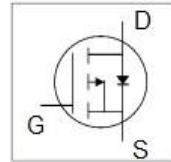


»Features

- Simple Drive Requirement
- Small Package Outline
- Surface Mount Device
- RoHS Compliant & Halogen-Free

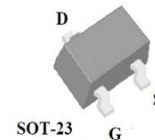
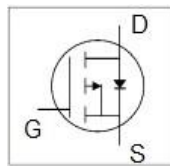


BVDSS	-20V
RDS(ON)typ	95mΩ
ID	-2A

»Description

CT2301M is from Coretong innovated design and silicon process technology to achieve the lowest possible on- resistance and fast switching performance. It provides the designer with an extreme efficient device for use in a wide range of

»Schematic & PIN Configuration



SOT-23

»Absolute Maximum Ratings@T_J=25°C(unless otherwise specified)

Symbol	Parameter	Rating	Units
VDS	Drain-Source Voltage	-20	V
VGS	Gate-Source Voltage	±8	V
I _{D-Continuous}	Drain Current, V _{GS} @ 10V	-2	A
I _{DM}	Pulsed Drain Current ₂	-10	A
P _{D@T_A=25°C}	Total Power Dissipation ₃	0.35	W
T _{STG}	Storage Temperature Range	-55 to 150	°C
T _J	Operating Junction Temperature Range	150	°C

»Thermal Data

Symbol	Parameter	Value	Unit
Rthj-a	Maximum Thermal Resistance, Junction-ambient ₃	357	°C/W

»Electrical Characteristics@T_j=25 oC(unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
BV _{DSS}	Drain-Source Breakdown Voltage	VGS=0V, ID=250uA	-20	-	-	V
RDS(ON)	Static Drain-Source On-Resistance	VGS=4.5V, ID=-2A	-	95	130	mΩ
		VGS=-2.5V, ID=-2A	-	130	175	mΩ
V _{GS(th)}	Gate Threshold Voltage	VDS=VGS, ID=250uA	-0.5	-	-1	V
g _{fs}	Forward Transconductance	VDS=5V, ID=-2A	-	4	-	S
I _{DSS}	Drain-Source Leakage Current	VDS=-20V, VGS=0V	-	-	-1	uA
I _{GSS}	Gate-Source Leakage	VGS=±8V, VDS=0V	-	-	±100	nA
Q _g	Total Gate Charge	ID=-2A	-	5.5	-	nC
Q _{gs}	Gate-Source Charge	VDS=-10V	-	3.3	-	nC
Q _{gd}	Gate-Drain ("Miller") Charge	VGS=-2.5V	-	1.3	-	nC
t _{d(on)}	Turn-on Delay Time	VDS=-10V ID=1A RG=1Ω VGS=-4.5V,RL=10Ω	-	11	20	ns
t _r	Rise Time		-	35	60	ns
t _{d(off)}	Turn-off Delay Time		-	30	50	ns
t _f	Fall Time		-	10	20	ns
C _{iss}	Input Capacitance	VGS=0V	-	405	-	pF
C _{oss}	Output Capacitance	VDS=-10V	-	75	-	pF
Crss	Reverse Transfer Capacitance	f=1.0MHz	-	55	-	pF

»Source-Drain Diode

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
V _{SD}	Forward On Voltage ²	IS=0.7A, VGS=0V	-	-0.8	-1.2	V

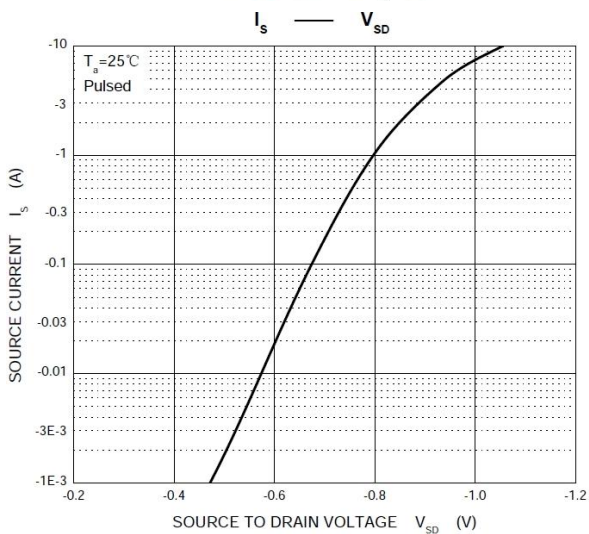
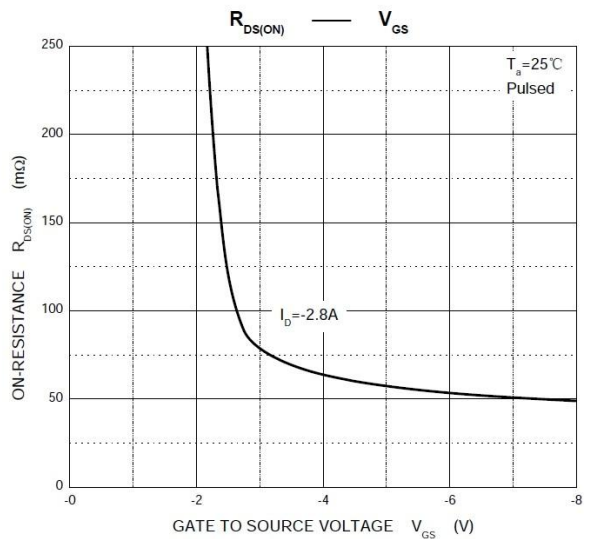
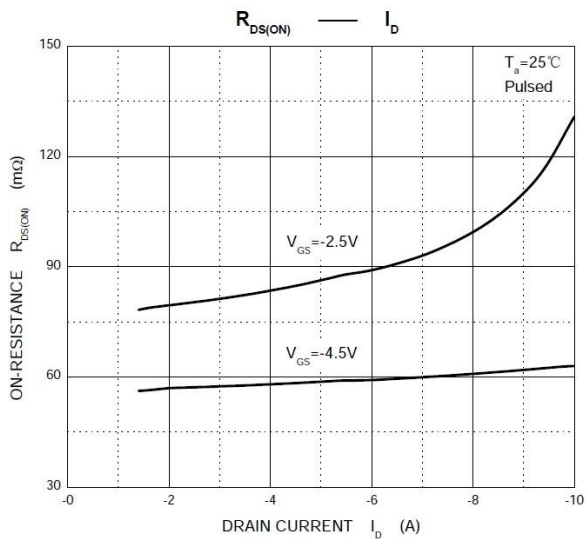
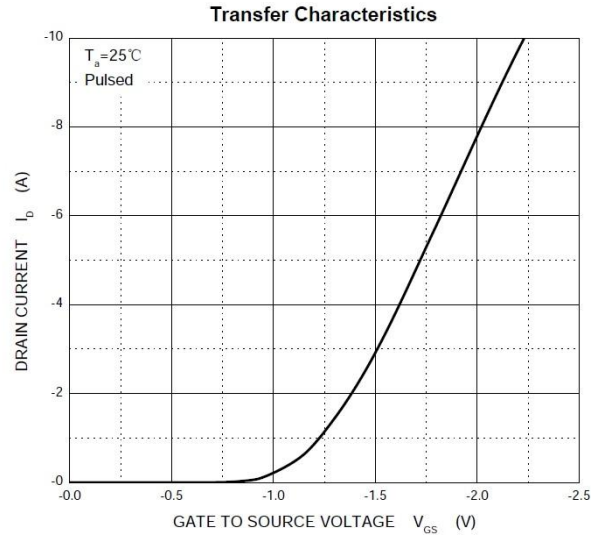
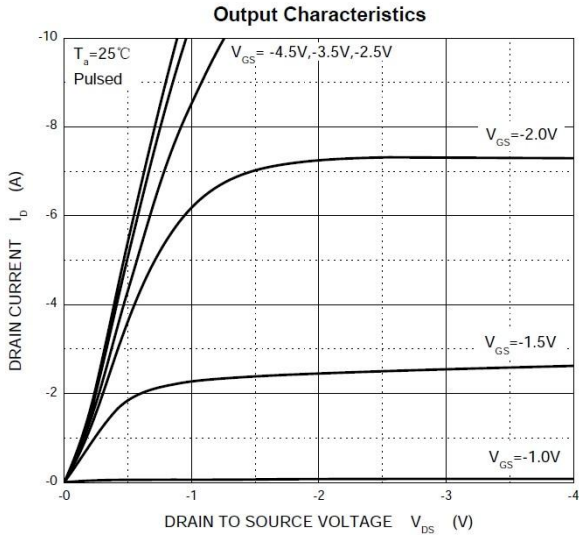
Notes:

1.Pulse width limited by Max. junction temperature.

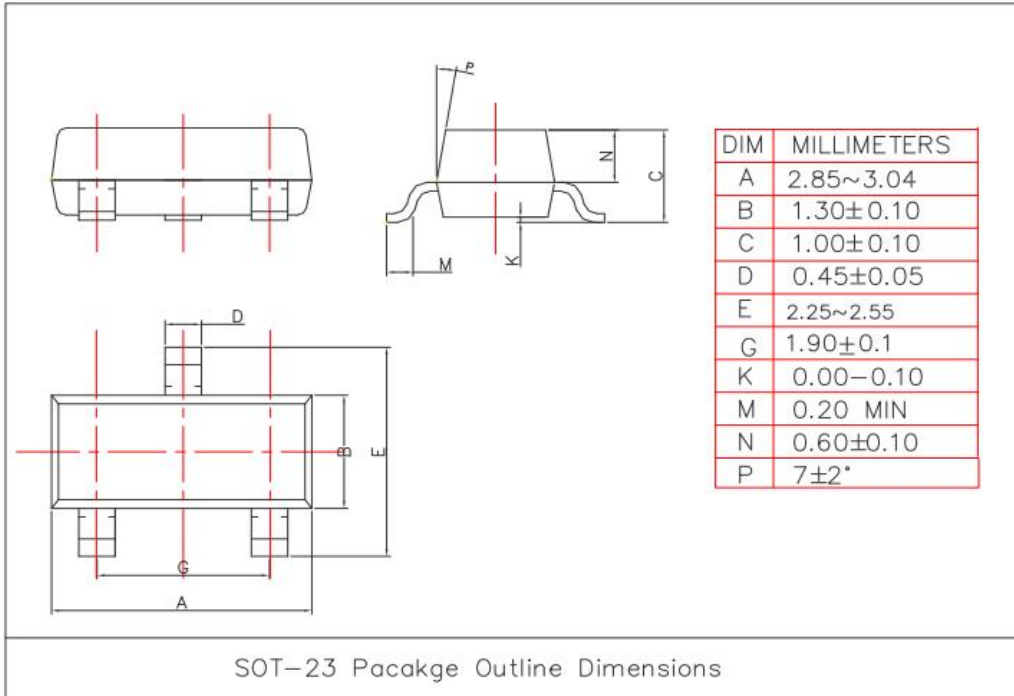
2.Pulse test

3.Surface mounted on 1 in² 2oz copper pad of FR4 board, t ≤10sec ; 300°C/W when mounted on min. copper pad.

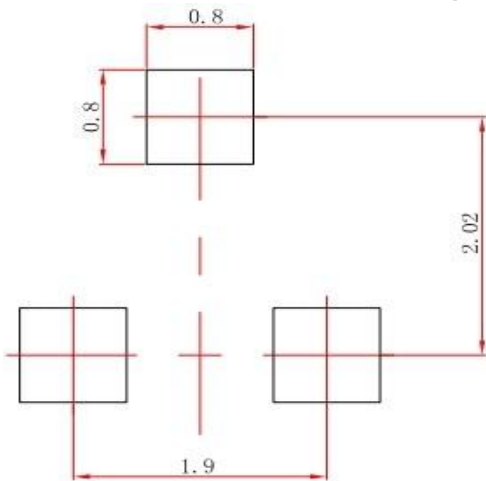
»Typical Performance Characteristics



»Package Outline : SOT-23



»SOT-23 FOOTPRINT:(mm)



»Ordering information

Order code	Package	Base qty	Delivery mode
CT2301M	SOT-23	3k	Tape and reel