

## »Features

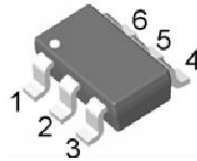
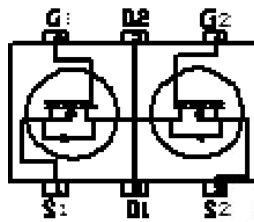
- Simple Drive Requirement
- Small Package Outline
- Surface Mount Device
- RoHS Compliant & Halogen-Free

BVDSS	20V
RDS(ON)typ	19mΩ
ID	6A

## »Description

CT8205M3 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-23-6L

## »Absolute Maximum Ratings@T<sub>j</sub>=25°C(unless otherwise specified)

Symbol	Parameter	Rating	Units
VDS	Drain-Source Voltage	20	V
VGS	Gate-Source Voltage	±12	V
I <sub>D-Continuous</sub>	Drain Current, V <sub>GS</sub> @ 10V	6	A
I <sub>DM</sub>	Pulsed Drain Current <sub>2</sub>	20	A
P <sub>D@T<sub>A</sub>=25°C</sub>	Total Power Dissipation <sub>3</sub>	0.3	W
T <sub>STG</sub>	Storage Temperature Range	-55 to 150	°C
T <sub>J</sub>	Operating Junction Temperature Range	150	°C

## »Electrical Characteristics@T<sub>j</sub>=25 oC(unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	VGS=0V, ID=250uA	20	-	-	V
RDS(ON)	Static Drain-Source On-Resistance	VGS=4.5V, ID=4.5A	-	19	24	mΩ
		VGS=2.5V, ID=3A	-	23	29	mΩ
V <sub>GS(th)</sub>	Gate Threshold Voltage	VDS=VGS, ID=250uA	0.4	0.65	1	V
g <sub>fs</sub>	Forward Transconductance	VDS=15V, ID=6A	-	25	-	S
I <sub>DSS</sub>	Drain-Source Leakage Current	VDS=16V, VGS=0V	-	-	-1	uA
I <sub>GSS</sub>	Gate-Source Leakage	VGS=±12V, VDS=0V	-	-	±100	nA
Q <sub>g</sub>	Total Gate Charge	ID=6A	-	7.49	8.5	nC
Q <sub>gs</sub>	Gate-Source Charge	VDS=10V	-	2.48	2.96	nC
Q <sub>gd</sub>	Gate-Drain ("Miller") Charge	VGS=4.5V	-	2.04	2.65	nC
t <sub>d(on)</sub>	Turn-on Delay Time	VDS=10V ID=1A RG=6Ω VGS=4.5V, RL=2.8Ω	-	17.5	29.8	ns
t <sub>r</sub>	Rise Time		-	28.5	38.2	ns
t <sub>d(off)</sub>	Turn-off Delay Time		-	41.2	59.6	ns
t <sub>f</sub>	Fall Time		-	10.4	26.3	ns
C <sub>iss</sub>	Input Capacitance	VGS=0V	-	492	-	pF
C <sub>oss</sub>	Output Capacitance	VDS=10V	-	54	-	pF
Crss	Reverse Transfer Capacitance	f=1.0MHz	-	7	-	pF

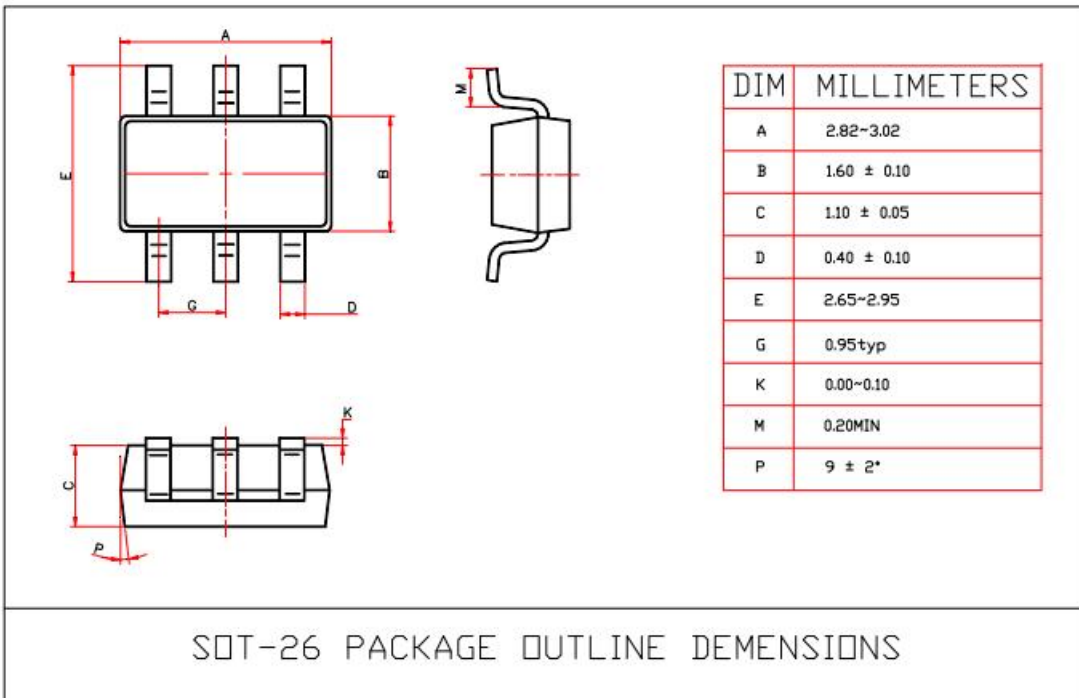
## »Source-Drain Diode

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
V <sub>SD</sub>	Forward On Voltage <sup>2</sup>	Is=2A, VGS=0V	-	-	1.2	V

### Notes:

- 1.Pulse width limited by Max. junction temperature.
- 2.Pulse test
- 3.Surface mounted on 1 in<sup>2</sup> 2oz copper pad of FR4 board, t ≤10sec ; 300°C/W when mounted on min. copper pad.

## »Package Outline : SOT-26



## »SOT-26 FOOTPRINT: (mm)

### »Ordering information

Order code	Package	Base qty	Delivery mode
CT8205M3	SOT-23-6L	3k	Tape and reel

