

### General Description

These Power MOSFETs are produced using Cmos's proprietary, planar stripe, DMOS technology. These devices are well suited for low voltage applications such as audio amplifier, high efficiency switching DC/DC converters, and DC motor control.

### Features

- P-Channel MOSFET
- Low ON-resistance
- 100% avalanche tested
- RoHS Compliant

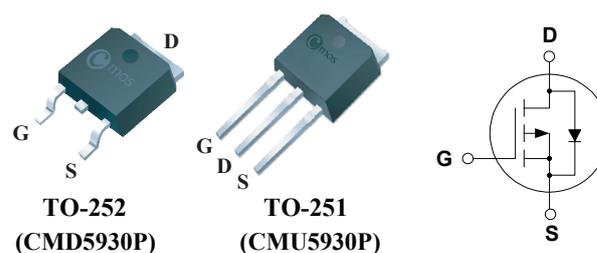
### Product Summary

BVDSS	R <sub>DS(on)</sub> max.	ID
-100V	125mΩ	-25A

### Applications

- DC-DC converters
- Motor control

### TO-252/251 Pin Configuration



### Absolute Maximum Ratings (T<sub>A</sub>=25 °C Unless Otherwise Noted)

Symbol	Parameter	Rating	Units
V <sub>DS</sub>	Drain-Source Voltage	-100	V
V <sub>GS</sub>	Gate-Source Voltage	±20	V
I <sub>D</sub> @T <sub>C</sub> =25 °C	Continuous Drain Current	-25	A
I <sub>D</sub> @T <sub>C</sub> =100 °C	Continuous Drain Current	-17	A
I <sub>DM</sub>	Pulsed Drain Current	-100	A
EAS	Single Pulse Avalanche Energy <sup>1</sup>	342	mJ
P <sub>D</sub> @T <sub>C</sub> =25 °C	Total Power Dissipation	65	W
T <sub>STG</sub>	Storage Temperature Range	-55 to 150	°C
T <sub>J</sub>	Operating Junction Temperature Range	150	°C

### Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
R <sub>θJA</sub>	Thermal Resistance Junction-ambient	---	62	°C/W
R <sub>θJC</sub>	Thermal Resistance Junction-case	---	1.92	°C/W

**Electrical Characteristics (T<sub>J</sub>=25°C , unless otherwise noted)**

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V , I <sub>D</sub> =-250μA	-100	---	---	V
R <sub>DS(ON)</sub>	Static Drain-Source On-Resistance	V <sub>GS</sub> =-10V , I <sub>D</sub> =-10A	---	110	125	mΩ
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>GS</sub> =V <sub>DS</sub> , I <sub>D</sub> = -250μA	-2.0	---	-4.0	V
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> =-100V , V <sub>GS</sub> =0V	---	---	-1	uA
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = ±20V , V <sub>DS</sub> =0V	---	---	±100	nA
g <sub>fs</sub>	Forward Transconductance	V <sub>DS</sub> = -5V , I <sub>D</sub> = -10A	---	9.2	---	S
R <sub>g</sub>	Gate Resistance	V <sub>DS</sub> =0V , V <sub>GS</sub> =0V , f=1MHz	---	0.8	---	Ω
Q <sub>g</sub>	Total Gate Charge	V <sub>DS</sub> =-80V , V <sub>GS</sub> =-10V , I <sub>D</sub> =-20A	---	35	---	nC
Q <sub>gs</sub>	Gate-Source Charge		---	7	---	
Q <sub>gd</sub>	Gate-Drain Charge		---	18	---	
T <sub>d(on)</sub>	Turn-On Delay Time	V <sub>DS</sub> =-50V , V <sub>GS</sub> = -10V , R <sub>G</sub> =25Ω I <sub>D</sub> =-20A	---	17	---	ns
T <sub>r</sub>	Rise Time		---	170	---	
T <sub>d(off)</sub>	Turn-Off Delay Time		---	60	---	
T <sub>f</sub>	Fall Time		---	110	---	
C <sub>iss</sub>	Input Capacitance	V <sub>DS</sub> =-25V , V <sub>GS</sub> =0V , f=1MHz	---	800	---	pF
C <sub>oss</sub>	Output Capacitance		---	270	---	
C <sub>rss</sub>	Reverse Transfer Capacitance		---	170	---	

**Diode Characteristics**

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I <sub>S</sub>	Continuous Source Current	V <sub>G</sub> =V <sub>D</sub> =0V , Force Current	---	---	-25	A
I <sub>SM</sub>	Pulsed Source Current		---	---	-100	A
V <sub>SD</sub>	Diode Forward Voltage	V <sub>GS</sub> =0V , I <sub>S</sub> =-10A , T <sub>J</sub> =25°C	---	-0.87	-1.2	V

Note :

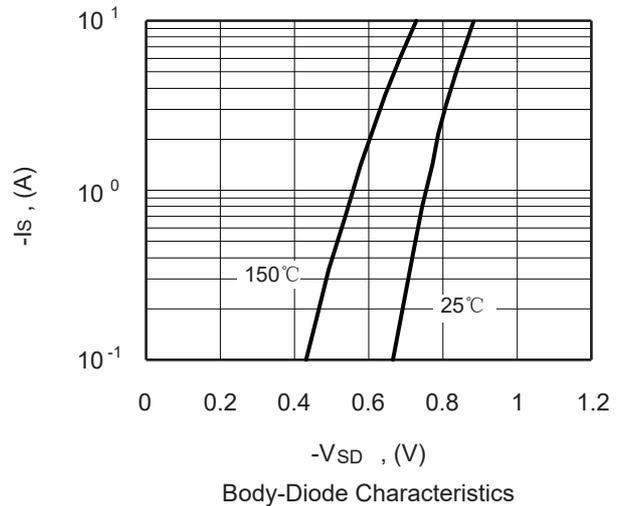
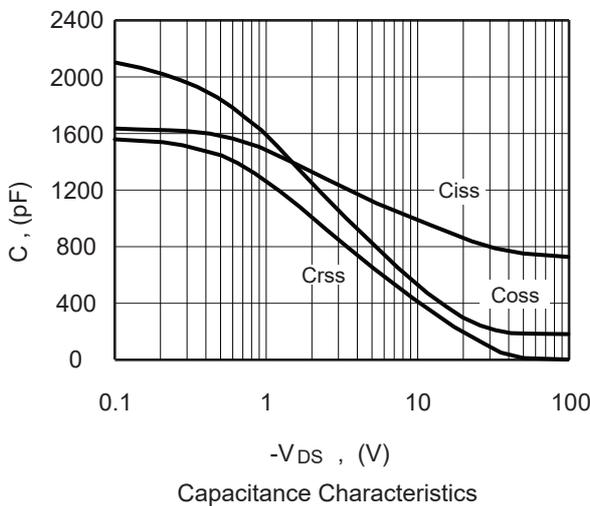
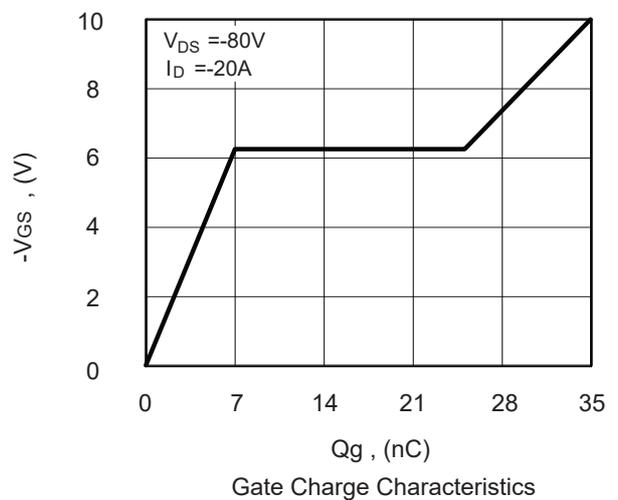
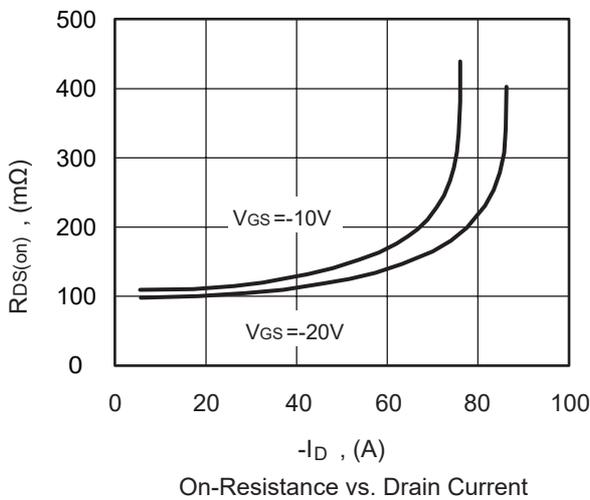
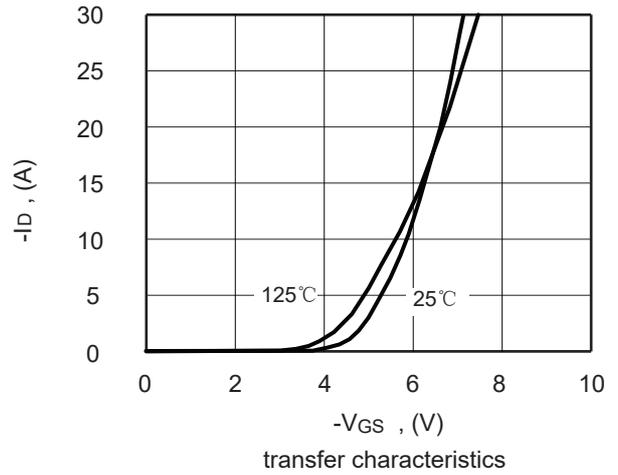
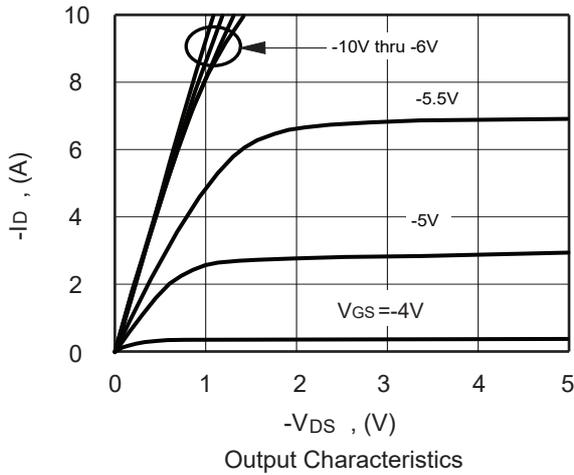
1.The EAS data shows Max. rating . The test condition is V<sub>DD</sub>=-50V , V<sub>GS</sub>=-10V , L=0.5mH , I<sub>AS</sub>=-37A.

This product has been designed and qualified for the counsumer market.

Cmos assumes no liability for customers' product design or applications.

Cmos reserver the right to improve product design ,functions and reliability wihtout notice.Please refer to the latest version of specification.

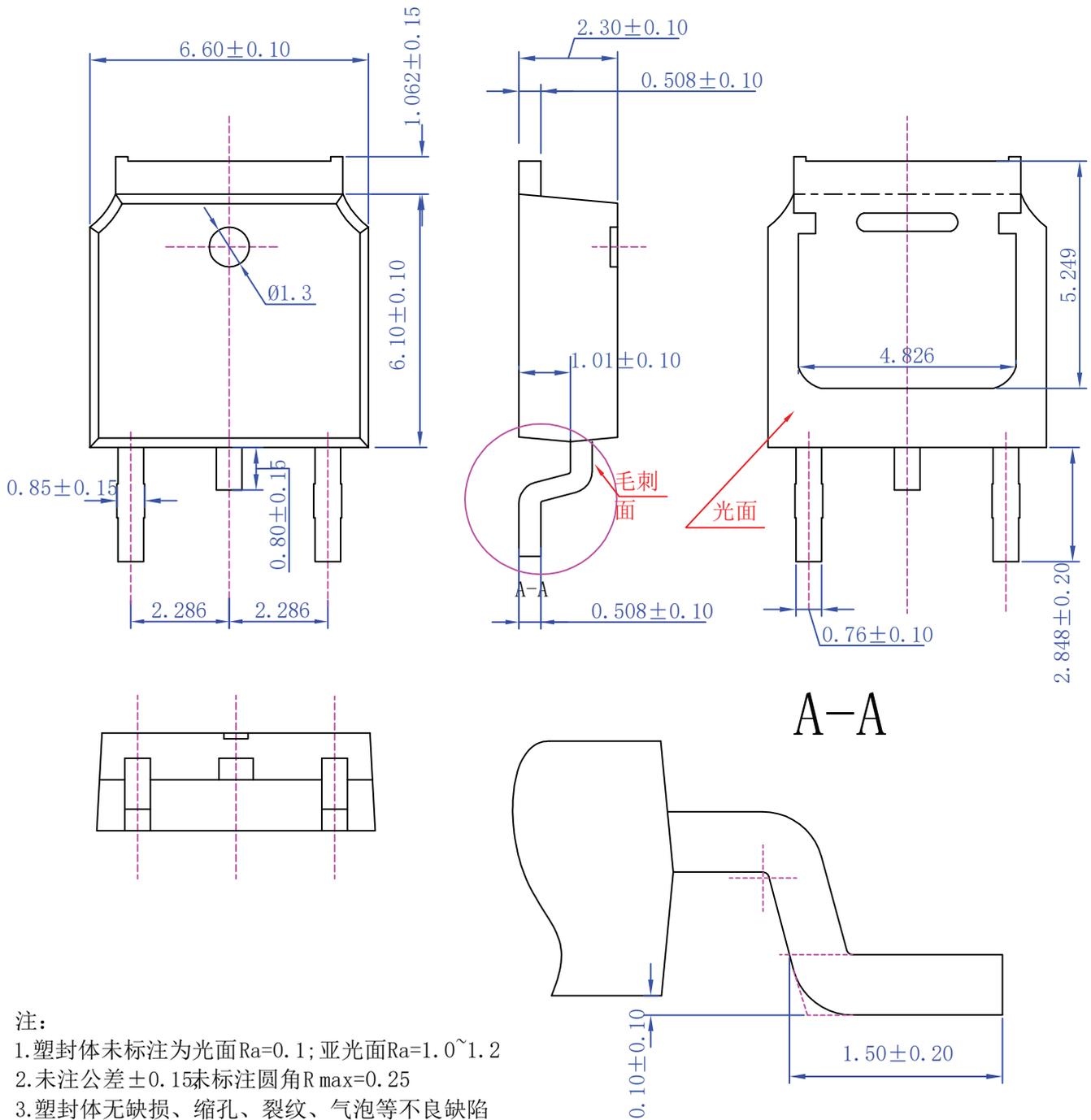
Typical Characteristics



Package Dimension

TO-252

Unit :mm



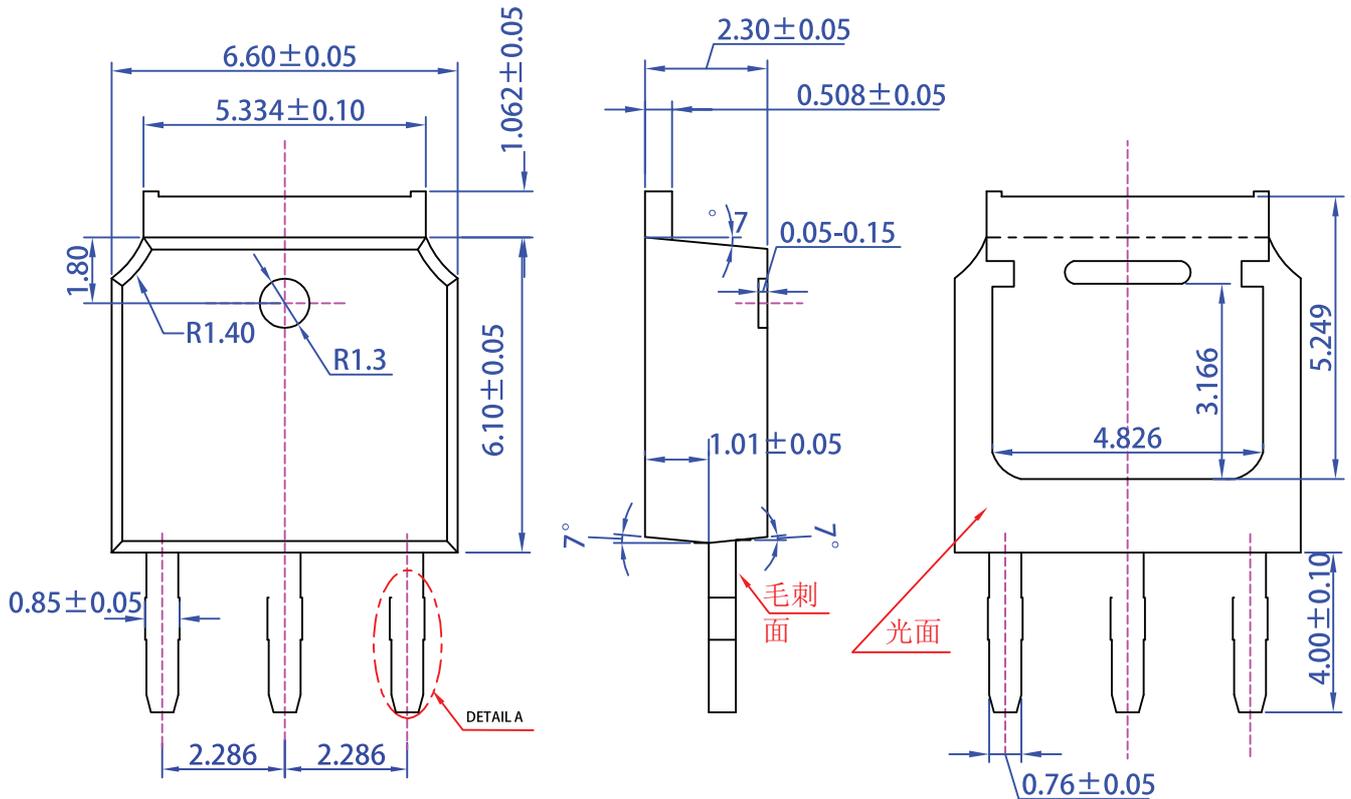
注:

1. 塑封体未标注为光面Ra=0.1; 亚光面Ra=1.0~1.2
2. 未注公差±0.15未标注圆角R max=0.25
3. 塑封体无缺损、缩孔、裂纹、气泡等不良缺陷
4. 标注单位mm
5. 顶针孔不允许凸出塑封体表面

Package Dimension

TO-251A

Unit :mm



DETAIL A  
 $0 < A1 \text{ or } A2 < 0.05$

