

### General Description

The 2922 uses advanced trench technology and design to provide excellent RDS(ON). This device is ideal for PWM, load switching and general purpose applications.

### Features

- Low On-Resistance
- High Reliability Capability with Passivation
- 100% avalanche tested
- RoHS Compliant

### Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
$V_{DS}$	Drain-Source Voltage	100	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D@T_C=25^\circ\text{C}$	Continuous Drain Current	10	A
$I_D@T_C=100^\circ\text{C}$	Continuous Drain Current	8	A
$I_{DM}$	Pulsed Drain Current	30	A
EAS	Single Pulse Avalanche Energy	8	mJ
$P_D@T_C=25^\circ\text{C}$	Total Power Dissipation	40	W
$T_{STG}$	Storage Temperature Range	-55 to 150	$^\circ\text{C}$
$T_J$	Operating Junction Temperature Range	-55 to 150	$^\circ\text{C}$

### Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JA}$	Thermal Resistance Junction-ambient (PCB mount) <sup>2</sup>	---	62.5	$^\circ\text{C}/\text{W}$
$R_{\theta JC}$	Thermal Resistance Junction -Case	---	3.8	$^\circ\text{C}/\text{W}$

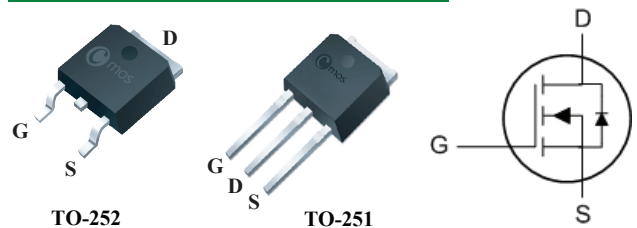
### Product Summary

BVDSS	RDSON	ID
100V	128m $\Omega$	10A

### Applications

- DC-DC Converters
- Power switching application

### TO-252/251 Pin Configuration



Type	Package	Marking
CMD2922	TO-252	CMD2922
CMU2922	TO-251	CMU2922

**Electrical Characteristics ( $T_J=25^{\circ}\text{C}$  , unless otherwise noted)**

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V$ , $I_D=250\mu A$	100	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	$V_{GS}=10V$ , $I_D=5A$	---	---	128	$m\Omega$
		$V_{GS}=4.5V$ , $I_D=3A$	---	---	140	
$V_{GS(th)}$	Gate Threshold Voltage	$V_{GS}=V_{DS}$ , $I_D=250\mu A$	1	---	3	V
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=80V$ , $V_{GS}=0V$	---	---	1	$\mu A$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=\pm 20V$ , $V_{DS}=0V$	---	---	$\pm 100$	nA
$g_{fs}$	Forward Transconductance	$V_{DS}=5V$ , $I_D=15A$	---	7	---	S
$R_g$	Gate Resistance	$V_{DS}=0V$ , $V_{GS}=0V$ , $f=1MHz$	---	6.3	---	$\Omega$
$Q_g$	Total Gate Charge	$V_{DS}=50V$ , $V_{GS}=10V$ , $I_D=10A$	---	22	---	nC
$Q_{gs}$	Gate-Source Charge		---	4	---	
$Q_{gd}$	Gate-Drain Charge		---	7	---	
$T_{d(on)}$	Turn-On Delay Time	$V_{DS}=50V$ , $V_{GS}=10V$ , $R_L=15\Omega$ $R_{GEN}=2.5\Omega$	---	12	---	ns
$T_r$	Rise Time		---	8	---	
$T_{d(off)}$	Turn-Off Delay Time		---	36	---	
$T_f$	Fall Time		---	10	---	
$C_{iss}$	Input Capacitance	$V_{DS}=50V$ , $V_{GS}=0V$ , $f=1MHz$	---	480	---	pF
$C_{oss}$	Output Capacitance		---	40	---	
$C_{rss}$	Reverse Transfer Capacitance		---	30	---	

**Diode Characteristics**

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
$I_S$	Continuous Source Current	$V_G=V_D=0V$ , Force Current	---	---	10	A
$V_{SD}$	Diode Forward Voltage	$V_{GS}=0V$ , $I_S=10A$ , $T_J=25^{\circ}\text{C}$	---	---	1.2	V

Note :

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