20N03

N-Channel Mode Power MOSFET

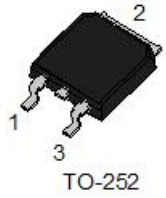
Features

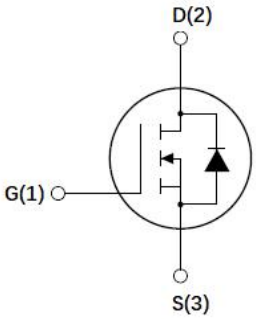
- $R_{DS(ON)}$<25mΩ@V_{GS}=10V
- High density cell design for ultra low $R_{DS(on)}$

Application

- **Power switching application**

Package





Package Marking and Ordering Information

Product ID	PACK	Qty（pcs）
20N03	TO-252	2500

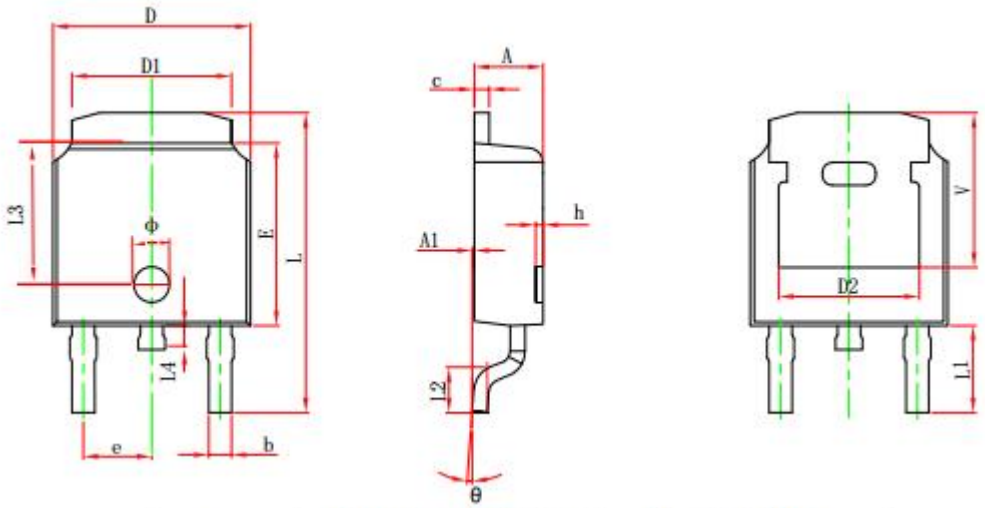
MAXIMUM RATINGS(Ta=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{DS}	Drain-Source Voltage	30	V
V_{GS}	Gate-Source Voltage	±12	V
I_D	Continuous Drain Current(T_C=25℃,T_J=150℃)	20	A
P_D	Power Dissipation	35	W
Tj	Junction Temperature	150	℃
Tstg	Storage Temperature	-55 to 150	
RθJA	Thermal Resistance From Junction To Ambient	62.7	℃/W

MOSFET ELECTEICAL CHARACTERISTICS(Ta=25℃ unless otherwise specified)

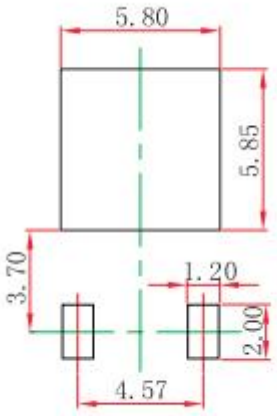
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Off characteristics						
Drain-Source breakdown Voltage	BV_{DSS}	V_{GS}=0V,I_D=250μA	30			V
Drain-Source diode forward Voltage	V_{SD}	V_{GS}=0V,I_S=1.0A	0.5		1.0	V
Zero gate voltage drain current	I_{DSS}	V_{DS}=24V,V_{GS}=0V			1.0	μA
Gate-body leakage current	I_{GSS}	V_{DS}=0V,V_{GS}=±12V			±100	nA
On characteristics						
Gate-threshold voltage	$V_{GS(th)}$	V_{DS}=V_{GS},I_D=250μA	0.9	1.0	1.2	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V,I_D=5.8A		18	20	mΩ
	$R_{DS(on)}$	V_{GS}=4.5V,I_D=5.8A		21	25	mΩ
Forward tranconductance	g_{FS}	V_{DS}=5V,I_D=5A	8			S

TO-252-2L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
b	0.635	0.770	0.025	0.030
c	0.460	0.580	0.018	0.023
D	6.500	6.700	0.256	0.264
D1	5.100	5.460	0.201	0.215
D2	4.830 REF.		0.190 REF.	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.712	10.312	0.382	0.406
L1	2.900 REF.		0.114 REF.	
L2	1.400	1.700	0.055	0.067
L3	4.460 REF.		0.1756 REF.	
L4	0.600	1.000	0.024	0.039
Φ	1.100	1.300	0.043	0.051
θ	0°	8°	0°	8°
h	0.000	0.300	0.000	0.012
V	5.250 REF.		0.207 REF.	

TO-252-2L Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.