

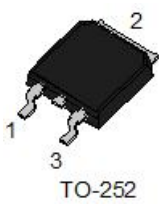

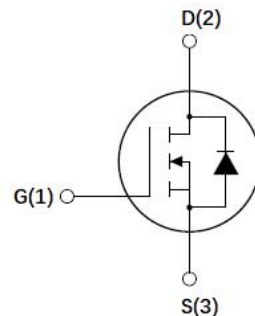


**20N03**

**N-Channel Mode Power MOSFET**

<p><b>Features</b></p> <ul style="list-style-type: none"> <li>• <math>R_{DS(ON)} &lt; 25m\Omega @ V_{GS} = 10V</math></li> <li>• High density cell design for ultra low <math>R_{DS(on)}</math></li> </ul>	<p><b>Application</b></p> <ul style="list-style-type: none"> <li>• Power switching application</li> </ul>
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**Package**

**Package Marking and Ordering Information**

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

**MAXIMUM RATINGS(Ta=25°C unless otherwise noted)**

Symbol	Parameter	Value	Unit
$V_{DS}$	Drain-Source Voltage	30	V
$V_{GS}$	Gate-Source Voltage	$\pm 12$	V
$I_D$	Continuous Drain Current( $T_c=25^\circ C, T_j=150^\circ C$ )	20	A
$P_D$	Power Dissipation	35	W
$T_j$	Junction Temperature	150	°C
$T_{stg}$	Storage Temperature	-55 to 150	
$R\theta_{JA}$	Thermal Resistance From Junction To Ambient	62.7	°C/W

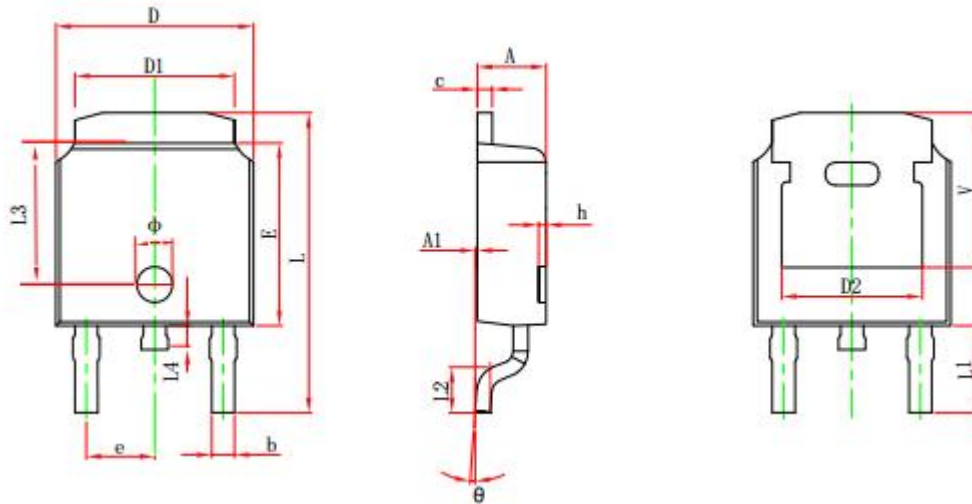


**20N03*****N-Channel Mode Power MOSFET*****MOSFET ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)**

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
<b>Off characteristics</b>						
Drain-Source breakdown Voltage	BV <sub>DSS</sub>	V <sub>GS</sub> =0V, I <sub>D</sub> =250μA	30			V
Drain-Source diode forward Voltage	V <sub>SD</sub>	V <sub>GS</sub> =0V, I <sub>S</sub> =1.0A	0.5		1.0	V
Zero gate voltage drain current	I <sub>DSS</sub>	V <sub>DS</sub> =24V, V <sub>GS</sub> =0V			1.0	μA
Gate-body leakage current	I <sub>GSS</sub>	V <sub>DS</sub> =0V, V <sub>GS</sub> =±12V			±100	nA
<b>On characteristics</b>						
Gate-threshold voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =250μA	0.9	1.0	1.2	V
Static Drain-Source On-Resistance	R <sub>DS(on)</sub>	V <sub>GS</sub> =10V, I <sub>D</sub> =5.8A		18	20	mΩ
	R <sub>DS(on)</sub>	V <sub>GS</sub> =4.5V, I <sub>D</sub> =5.8A		21	25	mΩ
Forward transconductance	g <sub>fs</sub>	V <sub>DS</sub> =5V, I <sub>D</sub> =5A	8			S

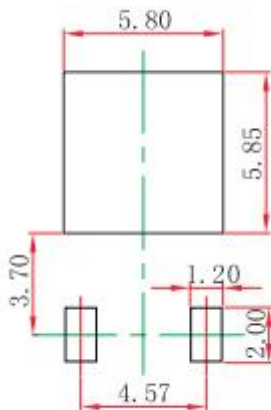


TO-252-2L Package Outline Dimensions



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
Phi	1.100	1.300	0.043	0.051
theta	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.

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