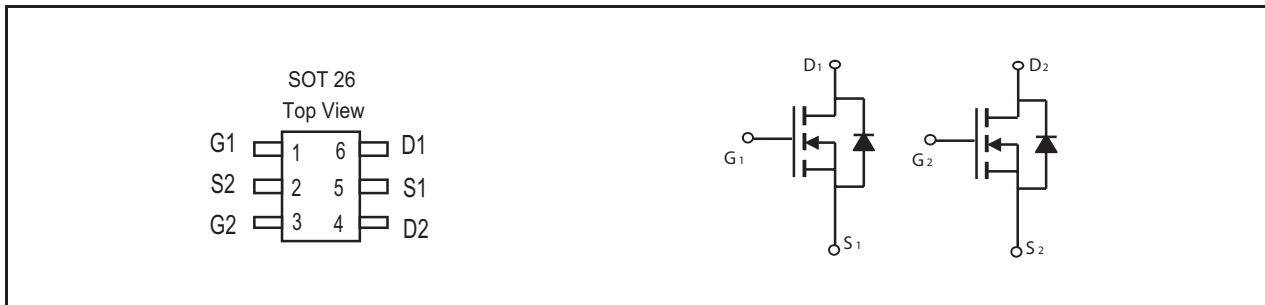


**Dual N-Channel Enhancement Mode Field Effect Transistor****PRODUCT SUMMARY**

V <sub>DSS</sub>	I <sub>D</sub>	R <sub>DS(ON)</sub> (mΩ) Max
20V	3.4A	60 @ V <sub>GS</sub> =4.5V
		90 @ V <sub>GS</sub> =2.5V

**FEATURES**

- Super high dense cell design for low R<sub>DS(ON)</sub>.
- Rugged and reliable.
- Surface Mount Package.

**ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise noted)**

Symbol	Parameter	Limit	Units
V <sub>DS</sub>	Drain-Source Voltage	20	V
V <sub>GS</sub>	Gate-Source Voltage	±12	V
I <sub>D</sub>	Drain Current-Continuous <sup>a</sup>	T <sub>A</sub> =25°C	3.4
		T <sub>A</sub> =70°C	2.7
I <sub>DM</sub>	-Pulsed <sup>b</sup>	13.5	A
P <sub>D</sub>	Maximum Power Dissipation <sup>a</sup>	T <sub>A</sub> =25°C	1.25
		T <sub>A</sub> =70°C	0.8
T <sub>J</sub> , T <sub>STG</sub>	Operating Junction and Storage Temperature Range	-55 to 150	°C

**THERMAL CHARACTERISTICS**

Symbol	Parameter	Limit	Units
R <sub>θJA</sub>	Thermal Resistance, Junction-to-Ambient <sup>a</sup>	100	°C/W

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## ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
<b>OFF CHARACTERISTICS</b>						
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V , I <sub>D</sub> =250uA	20			V
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> =16V , V <sub>GS</sub> =0V			1	uA
I <sub>GSS</sub>	Gate-Body Leakage Current	V <sub>GS</sub> = ±12V , V <sub>DS</sub> =0V			±100	nA
<b>ON CHARACTERISTICS</b>						
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =250uA	0.5	0.78	1.5	V
R <sub>DS(ON)</sub>	Drain-Source On-State Resistance	V <sub>GS</sub> =4.5V , I <sub>D</sub> =3.4A		48	60	m ohm
		V <sub>GS</sub> =2.5V , I <sub>D</sub> =2.8A		67	90	m ohm
g <sub>FS</sub>	Forward Transconductance	V <sub>DS</sub> =5V , I <sub>D</sub> =3.4A		9.5		S
<b>DYNAMIC CHARACTERISTICS <sup>c</sup></b>						
C <sub>ISS</sub>	Input Capacitance	V <sub>DS</sub> =10V, V <sub>GS</sub> =0V f=1.0MHz		230		pF
C <sub>OSS</sub>	Output Capacitance			55		pF
C <sub>RSS</sub>	Reverse Transfer Capacitance			35		pF
<b>SWITCHING CHARACTERISTICS <sup>c</sup></b>						
t <sub>D(ON)</sub>	Turn-On Delay Time	V <sub>DD</sub> =10V I <sub>D</sub> =1A V <sub>GS</sub> =4.5V R <sub>GEN</sub> =6 ohm		7		ns
t <sub>r</sub>	Rise Time			7.2		ns
t <sub>D(OFF)</sub>	Turn-Off Delay Time			13.5		ns
t <sub>f</sub>	Fall Time			1.6		ns
Q <sub>g</sub>	Total Gate Charge				4.5	
Q <sub>gs</sub>	Gate-Source Charge	V <sub>DS</sub> =10V, I <sub>D</sub> =3.4A, V <sub>GS</sub> =4.5V		0.9		nC
Q <sub>gd</sub>	Gate-Drain Charge			1.9		nC
<b>DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS</b>						
V <sub>SD</sub>	Diode Forward Voltage	V <sub>GS</sub> =0V, I <sub>S</sub> =1A		0.8	1.2	V
<b>Notes</b>						
a.Surface Mounted on FR4 Board, t ≤ 10sec.						
b.Pulse Test:Pulse Width ≤ 300us, Duty Cycle ≤ 2%.						
c.Guaranteed by design, not subject to production testing.						

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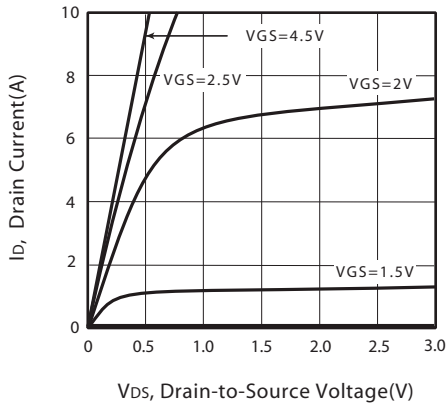


Figure 1. Output Characteristics

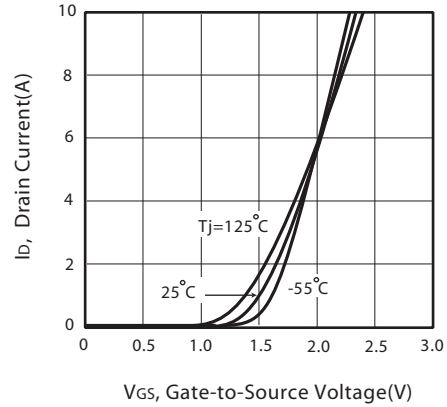


Figure 2. Transfer Characteristics

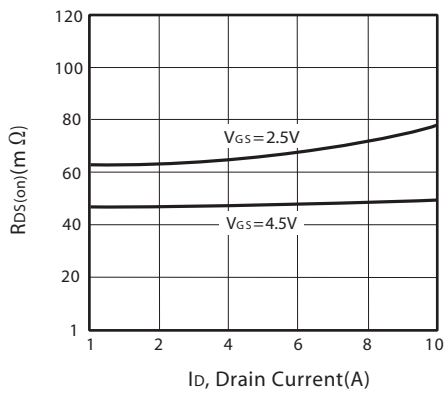


Figure 3. On-Resistance vs. Drain Current and Gate Voltage

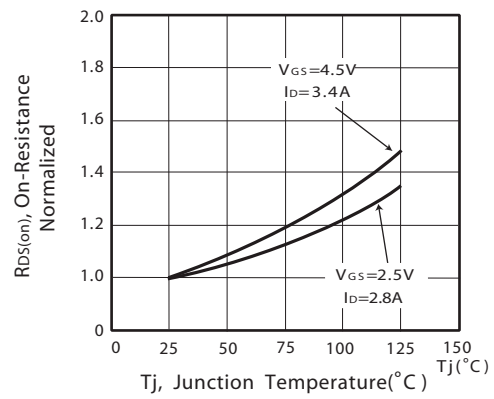


Figure 4. On-Resistance Variation with Drain Current and Temperature

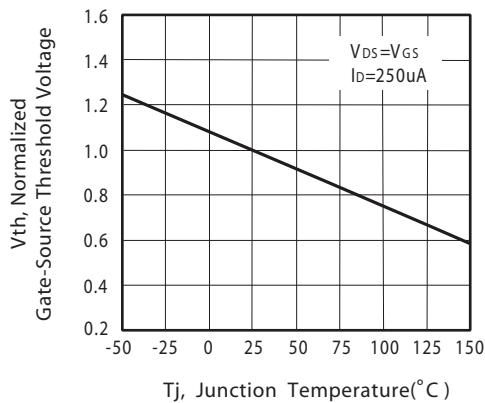


Figure 5. Gate Threshold Variation with Temperature

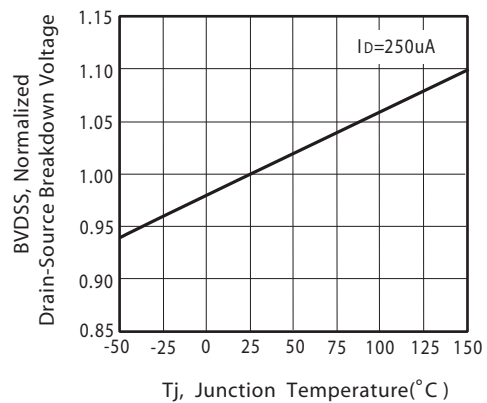


Figure 6. Breakdown Voltage Variation with Temperature

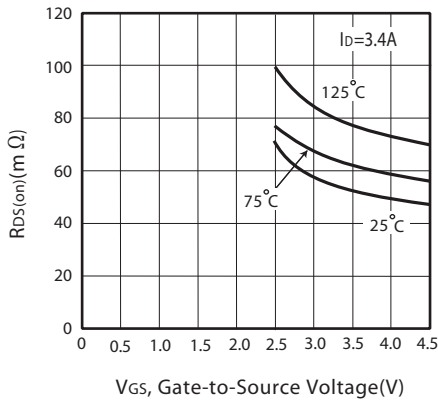


Figure 7. On-Resistance vs. Gate-Source Voltage

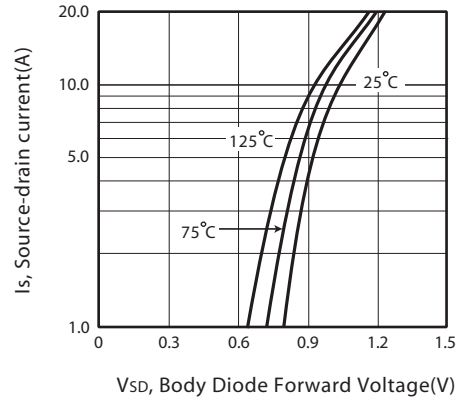


Figure 8. Body Diode Forward Voltage Variation with Source Current

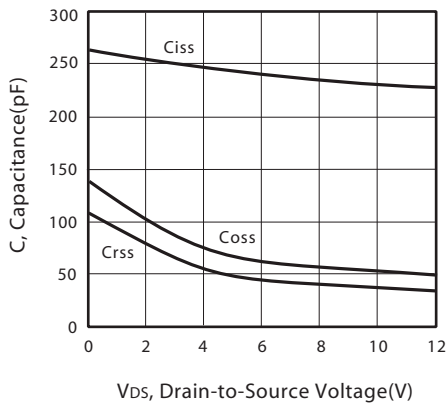


Figure 9. Capacitance

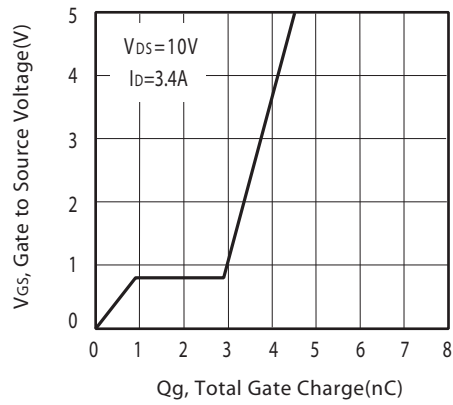


Figure 10. Gate Charge

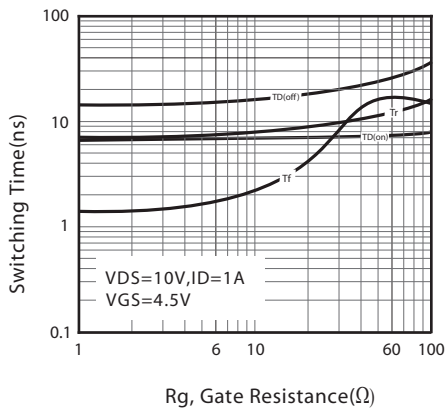


Figure 11. switching characteristics

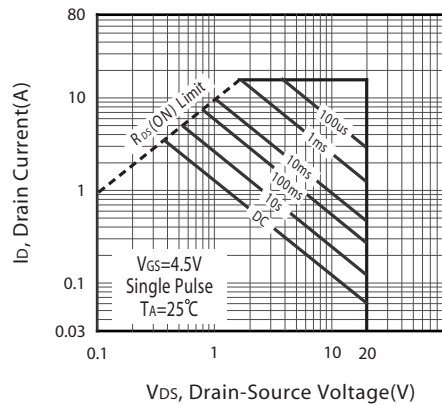
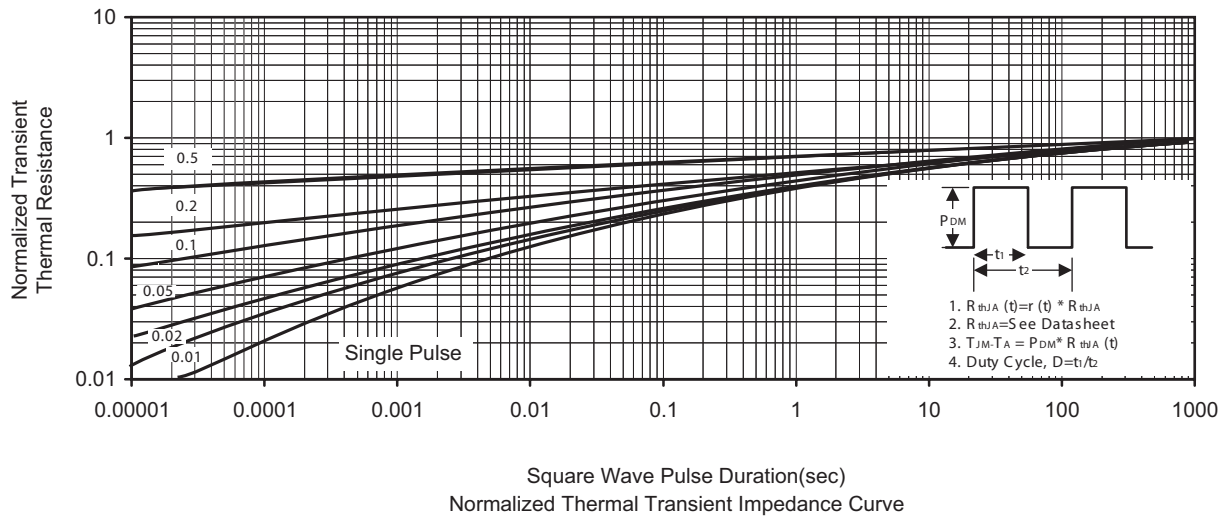


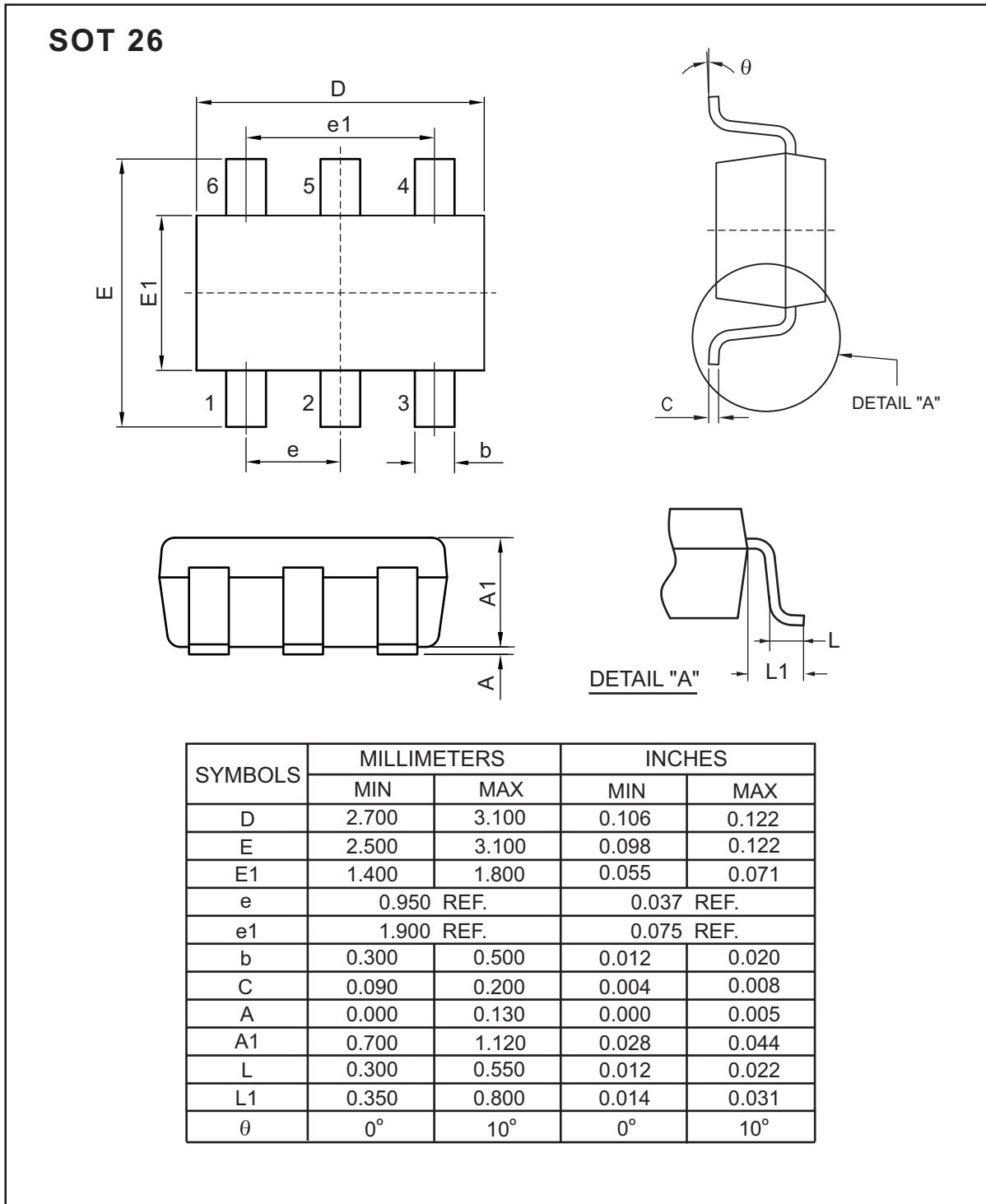
Figure 12. Maximum Safe Operating Area



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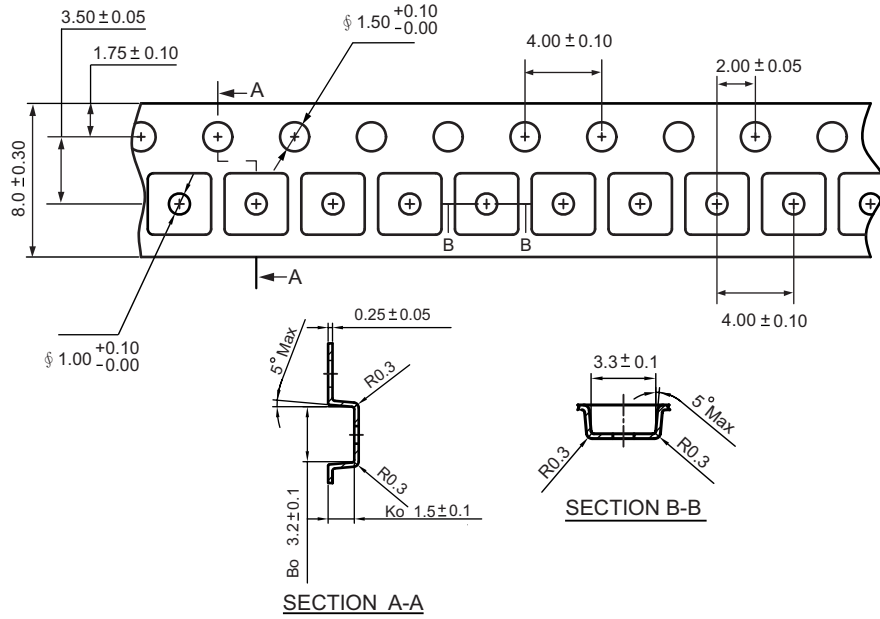
## PACKAGE OUTLINE DIMENSIONS



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## SOT 26 Tape and Reel Data

### SOT 26 Carrier Tape



### SOT 26 Reel

