DESCRIPTION

The AM2295A is available in SOT-26 Package.

VDSS	RDSON	ID
-20V	84mΩ	-2A

FEATURE

- -20V, -2A
- $R_{DS(ON)}$ Typ.= 84mΩ @ V_{GS} = -4.5V
- Advanced Trench Technology
- Excellent $R_{DS(ON)}$ and Low Gate Charge
- Lead Free

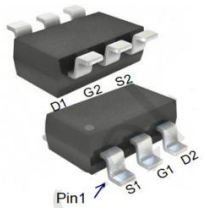
APPLICATIONS

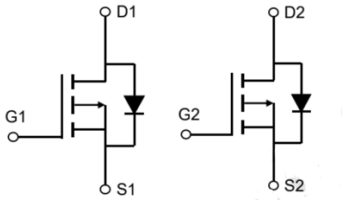
- Load Switch
- PWM Application
- Power Management

ORDERING INFORMATION

Package Type	Part Number	
SOT-26 SPQ: 3000pcs/Reel	E6	AM2295AE6VR
Note	V: Halogen free Package R: Tape & Reel	
AiT provides all RoHS products		

PIN DESCRIPTION





Pin #	Symbol	Function
1	S1	Source
2	G1	Gate
3	D2	Drain
4	S2	Source
5	G2	Gate
6	D1	Drain

ABSOLUTE MAXIMUM RATINGS

T_J = 25°C, unless otherwise specified.

V_{DS}, Drain-to-Source Voltage		-20V
V_{GS}, Gate Source Voltage		±12V
I_D, Continuous Drain Current	T_A = 25°C	-2A
	T_A = 100°C	-1.2A
I_{DM}, Pulsed Drain Current (1)		-8A
P_D, Power Dissipation	T_C = 25°C	0.6W
$R_{\theta JA}$, Thermal Resistance, Junction-to-Ambient(2)		210°C/W
T_{STG}, Storage Temperature Range		-55°C ~ +150°C
T_J, Junction Temperature Range		-55°C ~ +150°C

1. Repetitive Rating: Pulse Width Limited by Maximum Junction Temperature.
2. $R_{\theta JA}$ is measured with the device mounted on a 1 inch² pad of 2 oz copper FR4 PCB
3. Pulse Test: Pulse Width ≤ 300us, Duty Cycle ≤ 0.5%.

ELECTRICAL CHARACTERISTICS

T_J = 25°C, unless otherwise specified.

Parameter	Symbol	Conditions	Min	Typ.	Max	Unit
Off Characteristics						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}= 0V, I_D = -250μA	-20	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-20V, 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	-0.4	-0.62	-1	V
Static Drain-Source ON-Resistance (1)	$R_{DS(ON)}$	V_{GS} = -4.5V, I_D = -2A	-	84	109	mΩ
		V_{GS} = -2.5V, I_D = -1.5A	-	118	153	
Dynamic Characteristics						
Input Capacitance	C_{iss}	V_{DS}= -10V, V_{GS}=0V, f=1MHZ	-	164	-	pF
Output Capacitance	C_{oss}		-	29	-	
Reverse Transfer Capacitance	C_{rss}		-	23	-	
Total Gate Charge	Q_g	V_{DS} = -10V ， I_D =-2A V_{GS}=0V ~-4.5V	-	2.2	-	nC
Gate-Source Charge	Q_{gs}		-	0.5	-	
Gate-Drain Charge	Q_{gd}		-	0.5	-	
Switching Characteristic						
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=-10V, I_D = -2A R_{GEN}=3Ω, V_{GS}= -4.5V	-	10	-	ns
Turn-On Rise Time	t_r		-	30	-	
Turn-Off Delay Time	$t_{d(off)}$		-	63	-	
Turn-Off Fall Time	t_f		-	50	-	
Drain-Source Diode Characteristics and Max Ratings						
Maximum Continuous Drain to Source Diode Forward Current	I_{SD}		-	-	-2	A
Maximum Pulsed Drain to Source Diode Forward Current	I_{SM}		-	-	-8	A
Drain to Source Diode Forward Voltage	V_{SD}	V_{GS}=0V, I_S= -2A	-	-	-1.2	V

TYPICAL PERFORMANCE CHARACTERISTICS

Fig 1. Output Characteristics

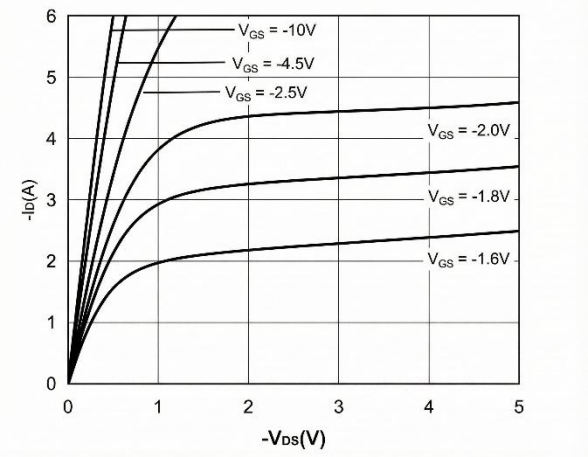


Fig 2. Typical Transfer Characteristics

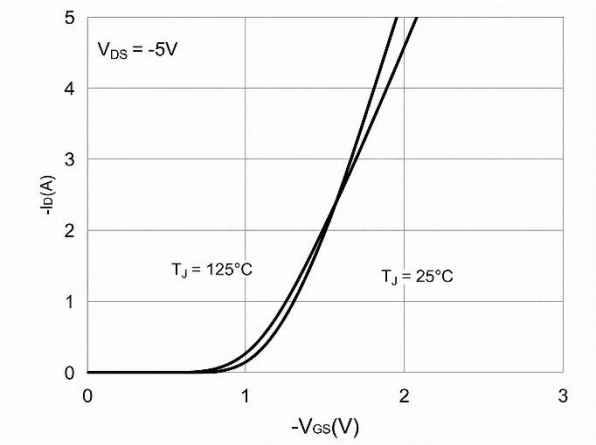


Fig 3. On-resistance vs. Drain Current

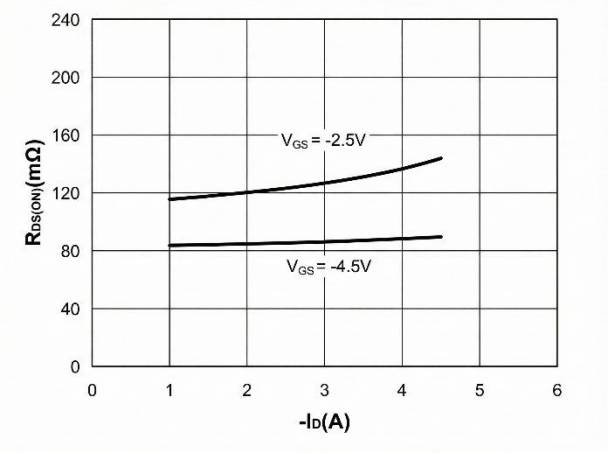


Fig 4. Body Diode Characteristics

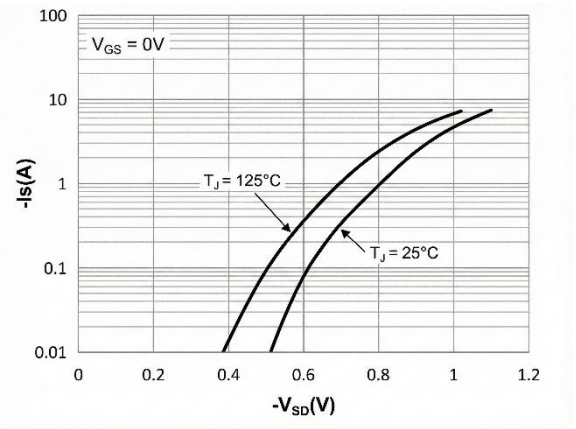


Fig 5. Gate Charge Characteristics

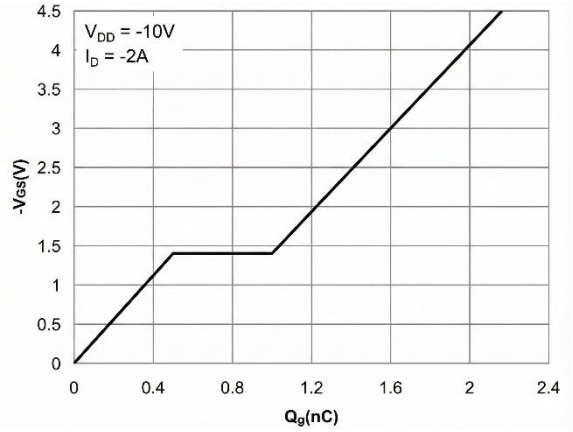


Fig 6. Capacitance Characteristics

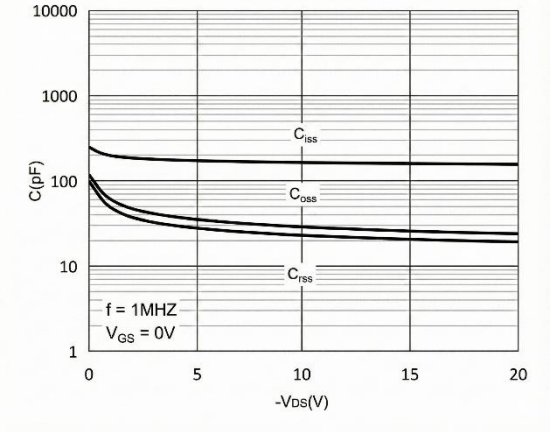


Fig 7. Normalized Breakdown Voltage vs. Junction Temperature

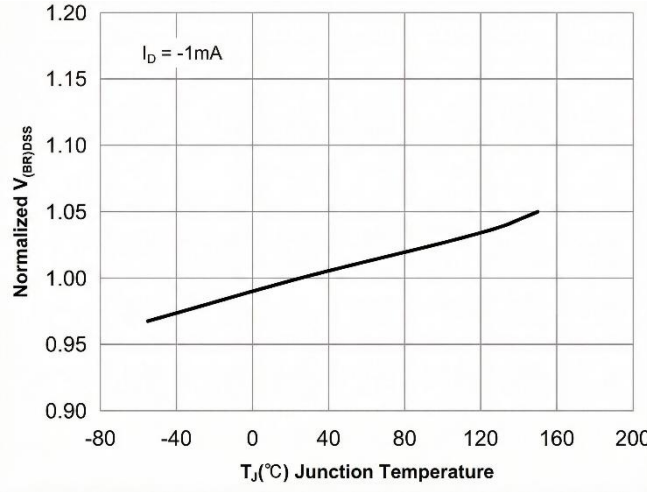


Fig 8. Normalized on Resistance vs. Junction Temperature

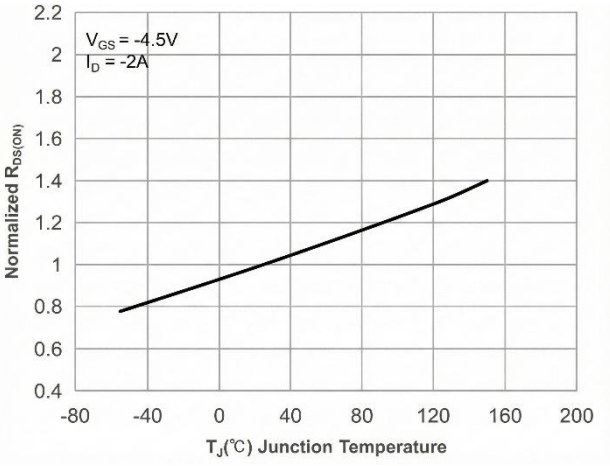


Fig 9. Maximum Safe Operating Area

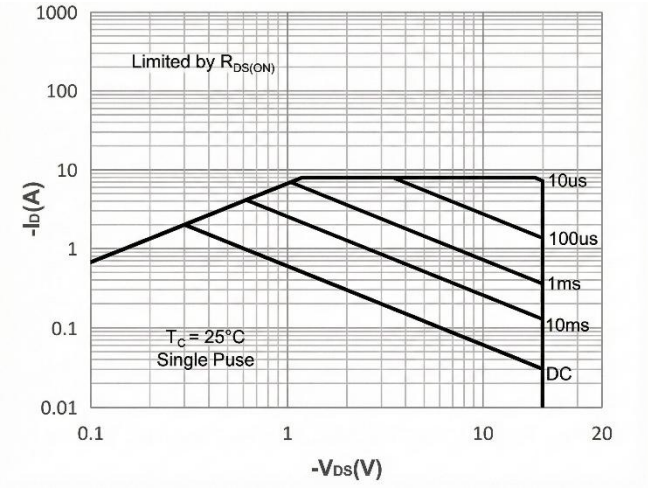


Fig 10. Peak Current Capacity.

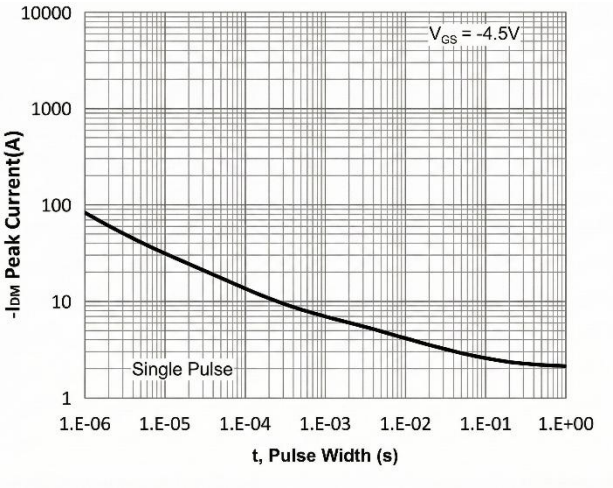


Fig 11. Normalized Maximum Transient Thermal Impedance

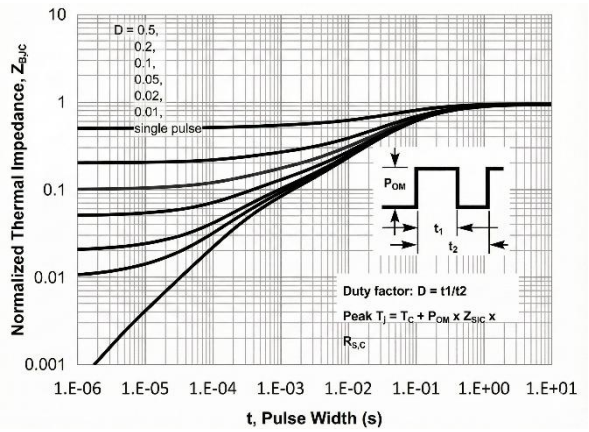


Fig 12. Maximum Continuous Drain Current vs Case Temperature

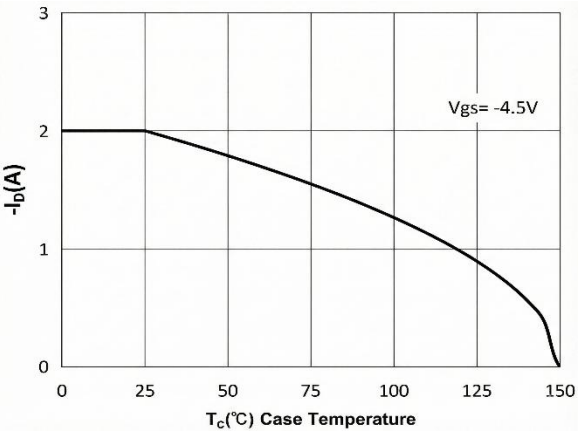


Fig 13. Gate Charge Test Circuit & Waveform

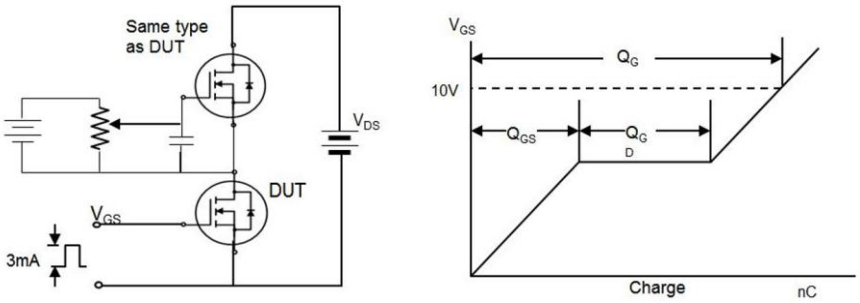


Fig 14. Resistive Switching Test Circuit & Waveform

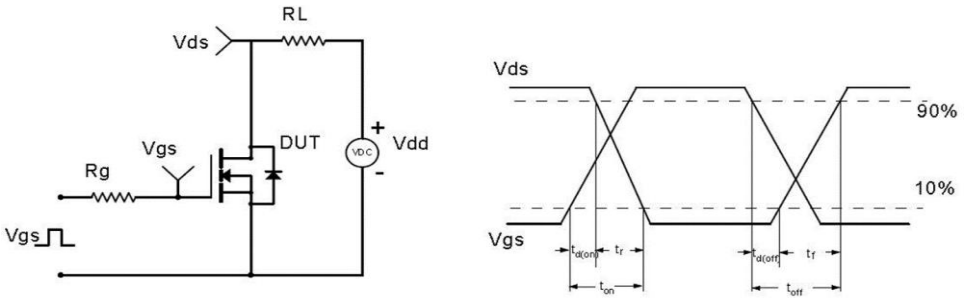


Fig 15. Unclamped Inductive Switching Test Circuit& Waveform

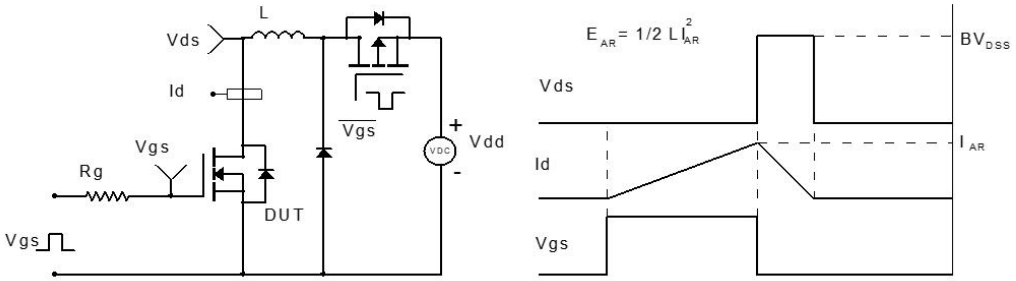
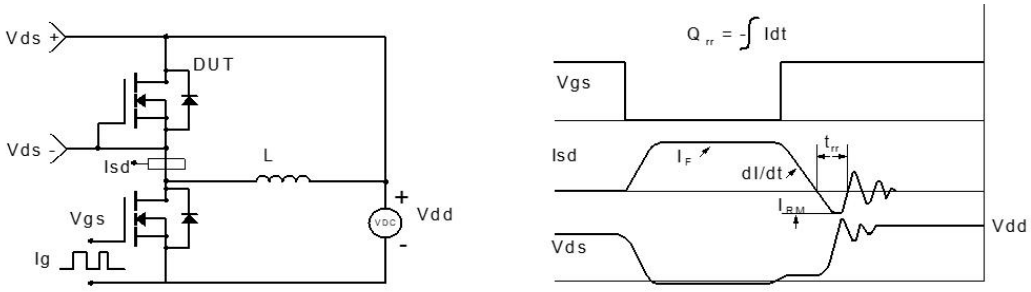
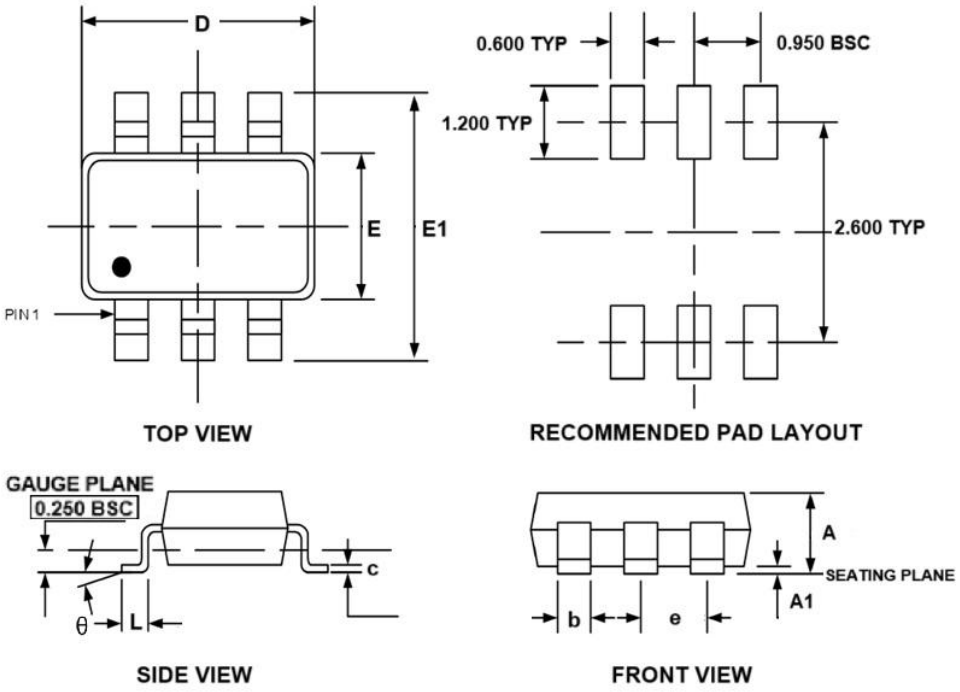


Fig 16. Diode Recovery Test Circuit & Waveform



PACKAGE INFORMATION

Dimension in SOT-26 (Unit: mm)



Symbol	Millimeters	
	Min	Max
A	-	1.450
A1	0.000	0.150
b	0.250	0.500
c	0.090	0.200
D	2.800	3.000
E	1.500	1.700
E1	2.600	3.100
e	0.950 BSC	
L	0.300	0.550
θ	0°	8°

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