



DESCRIPTION

AM3443C is available in a SOT-26 package.

ORDERING INFORMATION

Package Type	Part Number	
SOT-26 SPQ: 3,000pcs/Reel	E6	AM3443CE6R
		AM3443CE6VR
Note	V: Halogen free Package R: Tape & Reel	
AiT provides all RoHS products		

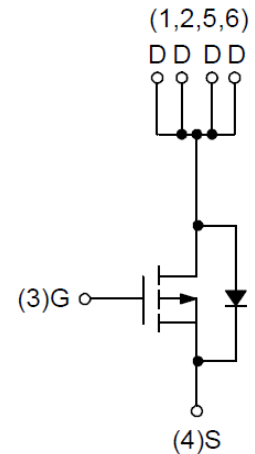
FEATURES

- -20V/-5.6A,
 $R_{DS(ON)} = 45m\Omega(\text{max.}) @ V_{GS} = -4.5V$
 $R_{DS(ON)} = 66m\Omega(\text{max.}) @ V_{GS} = -2.5V$
 $R_{DS(ON)} = 104m\Omega(\text{max.}) @ V_{GS} = -1.8V$
- 100% UIS + R_g Tested
- Reliable and Rugged
- Super High Dense Cell Design
- Available in SOT-26 Package

APPLICATION

- Power Management in Notebook Computer, Portable Equipment and Battery Powered Systems.

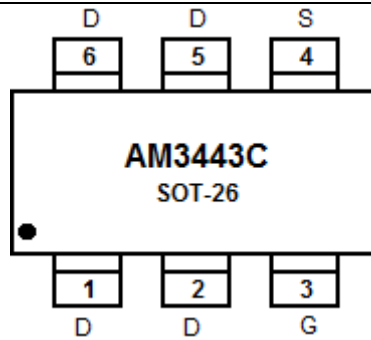
TYPICAL APPLICATION



P-Channel MOSFET



PIN DESCRIPTION



Top View

Pin #	Symbol	Function
1	D	Drain
2	D	Drain
3	G	Gate
4	S	Source
5	D	Drain
6	D	Drain



ABSOLUTE MAXIMUM RATINGS

T_A = 25°C, unless otherwise noted

V _{DSS} , Drain-Source Voltage		-20V
V _{GSS} , Gate-Source Voltage		±12V
I _D [*] , Continuous Drain Current	T _A =25°C	-5.6A
	T _A =70°C	-4.4A
I _{DM} [*] , 300µs Pulsed Drain Current	T _A =25°C	-22.2A
	T _A =70°C	-17.8A
I _S [*] , Diode Continuous Forward Current		-1A
T _J , Maximum Junction Temperature		150°C
T _{STG} , Storage Temperature Range		-55°C~150°C
P _D [*] , Maximum Power Dissipation	T _A =25°C	2.1W
	T _A =70°C	1.3W
R _{θJA} [*] , Thermal Resistance-Junction to Ambient	t ≤ 10s	60°C/W
	Steady State	100°C/W

Stress beyond above listed "Absolute Maximum Ratings" may lead permanent damage to the device. These are stress ratings only and operations of the device at these or any other conditions beyond those indicated in the operational sections of the specifications are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

NOTE: *Surface Mounted on 1in² pad area, t ≤ 10sec.



ELECTRICAL CHARACTERISTICS

T_A = 25°C, unless otherwise noted

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0V, I _{DS} =-250μA	-20	-	-	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-16V, V _{GS} =0V T _J =85°C	-	-	-1	μA
			-	-	-30	
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _{DS} =-250μA	-0.5	-0.7	-1	V
Gate Leakage Current	I _{GSS}	V _{GS} =±12V, V _{DS} =0V	-	-	±100	nA
Drain-Source On-state Resistance	R _{DS(ON)} NOTE1	V _{GS} =-4.5V, I _{DS} =-5.6A	-	36	45	mΩ
		V _{GS} =-2.5V, I _{DS} =-3.5A	-	49	66	
		V _{GS} =-1.8V, I _{DS} =-1.5A	-	72	104	
Diode Forward Voltage	V _{SD} NOTE1	I _{SD} =-1A, V _{GS} =0V	-	-0.7	-1	V
Gate Charge Characteristics NOTE2						
Total Gate Charge	Q _g	V _{DS} =-10V, V _{GS} =-4.5V, I _{DS} =-5.6A	-	6.8	-	nC
Gate-Source Charge	Q _{gs}		-	0.8	-	
Gate-Drain Charge	Q _{gd}		-	2.5	-	
Dynamic Characteristics NOTE2						
Gate Resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz	-	3.6	-	Ω
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =-10V, Frequency=1.0MHz	-	590	-	pF
Output Capacitance	C _{oss}		-	122	-	
Reverse Transfer Capacitance	C _{rss}		-	92	-	
Turn-on Delay Time	t _{d(ON)}	V _{DD} =-10V, R _L =10Ω, I _{DS} =-1A, V _{GEN} =-4.5V, R _G =6Ω	-	7.2	-	ns
Turn-on Rise Time	t _r		-	13.4	-	
Turn-off Delay Time	t _{d(OFF)}		-	26	-	
Turn-off Fall Time	t _f		-	17	-	
Reverse Recovery Time	t _{rr}	I _{SD} =-5.6A,	-	18	-	ns
Reverse Recovery Charge	Q _{rr}	dI _{SD} /dt=100A/μs	-	7	-	nC

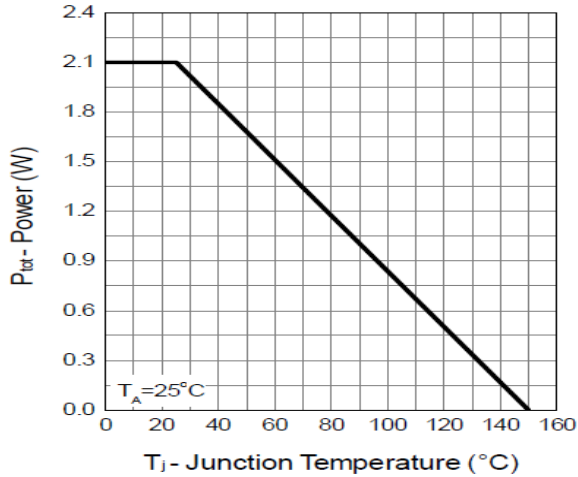
NOTE1: Pulse test; pulse width≤300μs, duty cycle≤2%.

NOTE2: Guaranteed by design, not subject to production testing.

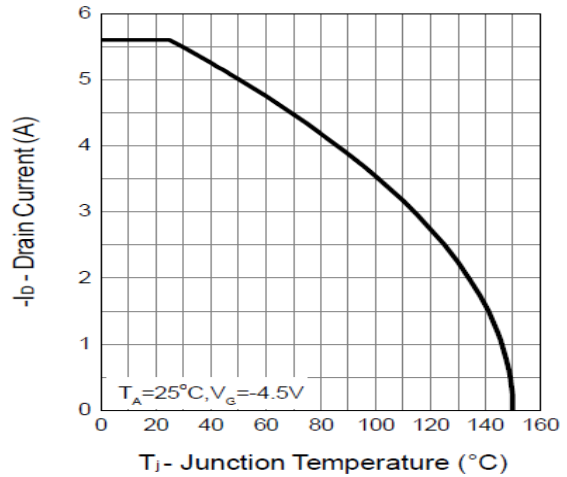


TYPICAL PERFORMANCE CHARACTERISTICS

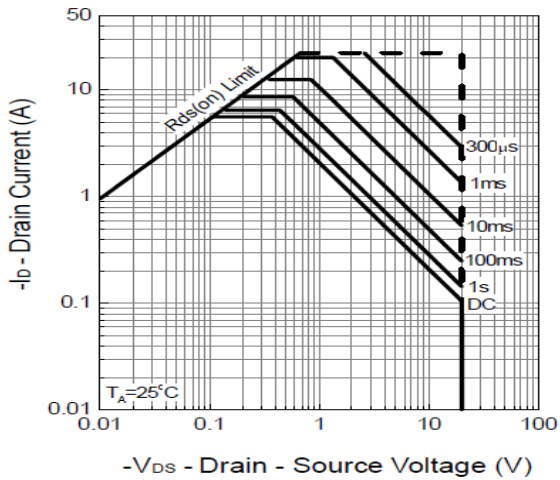
1. Power Dissipation



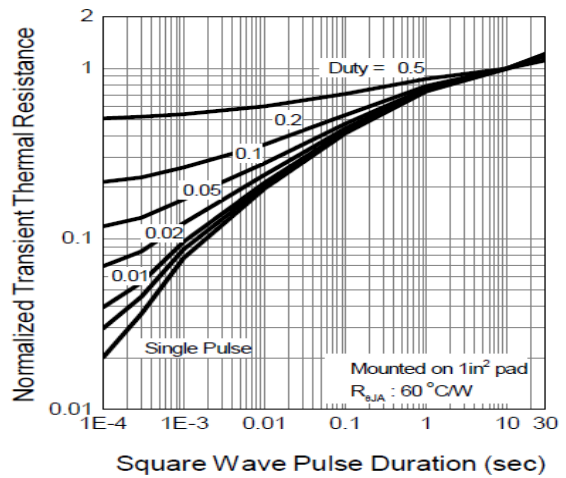
2. Drain Current



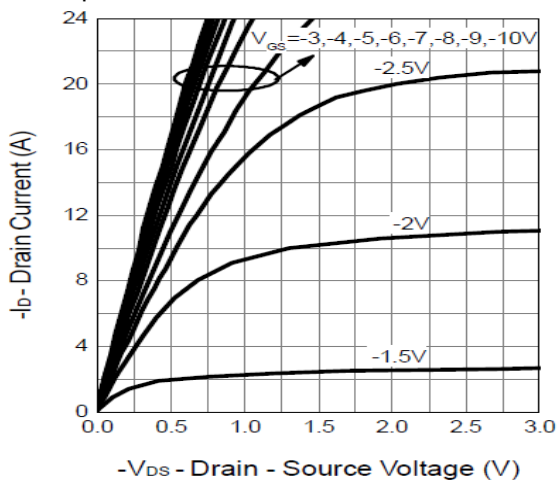
3. Safe Operation Area



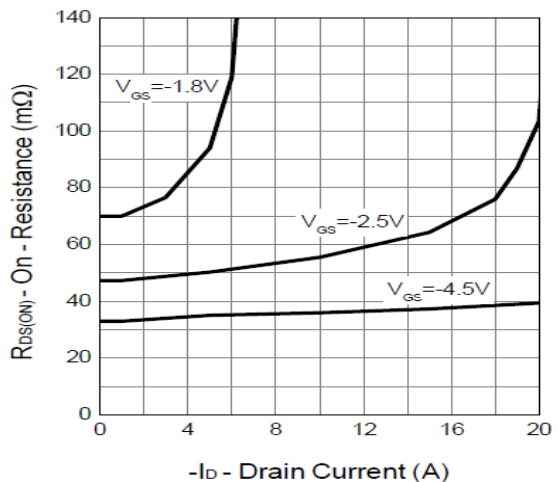
4. Thermal Transient Impedance



5. Output Characteristics

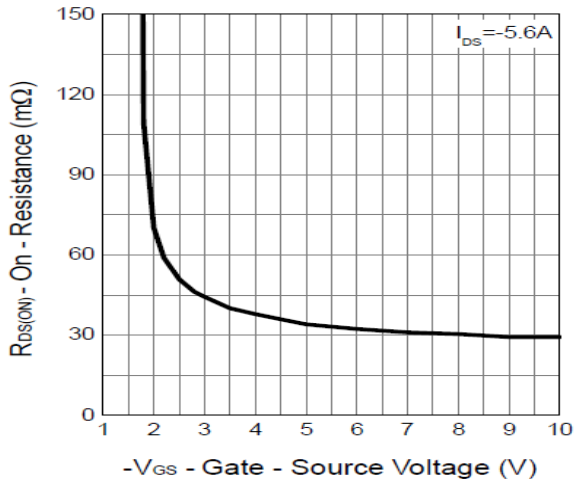


6. Drain-Source On Resistance

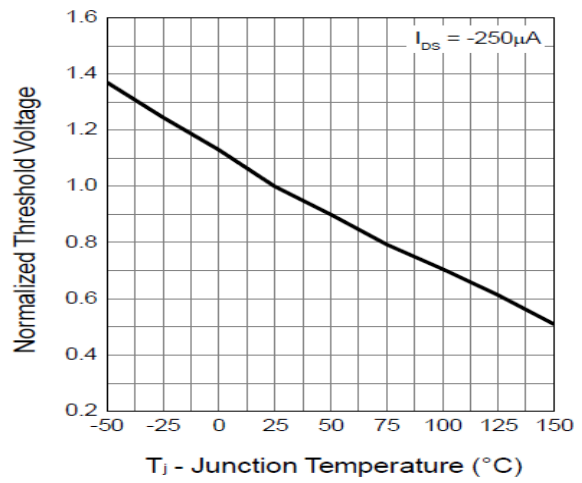




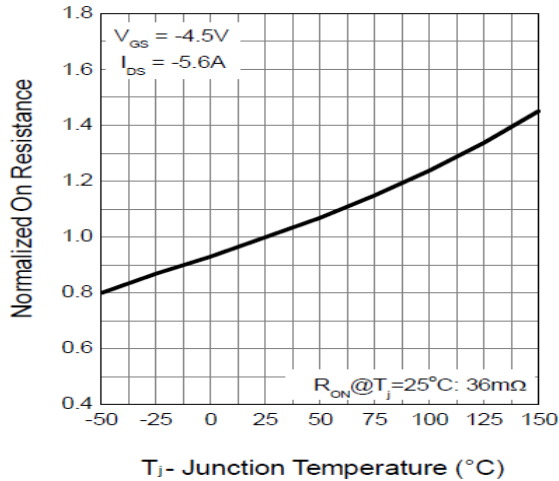
7. Gate-Source On Resistance



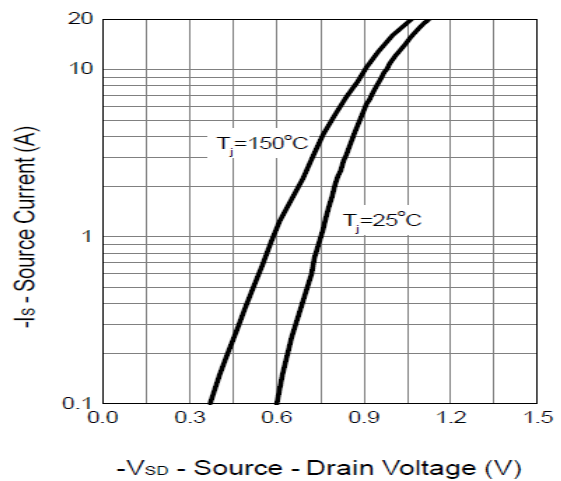
8. Gate Threshold Voltage



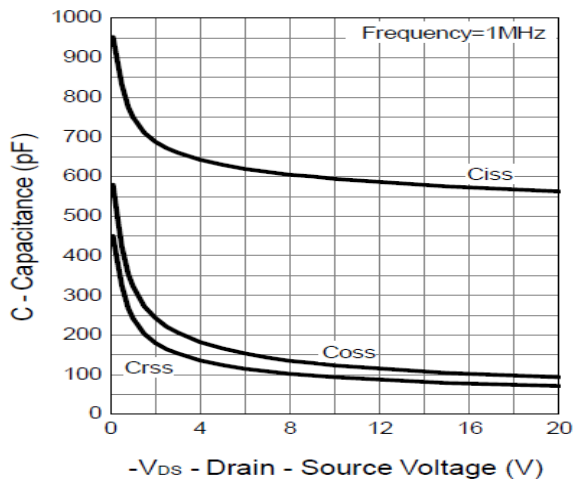
9. Drain-Source On Resistance



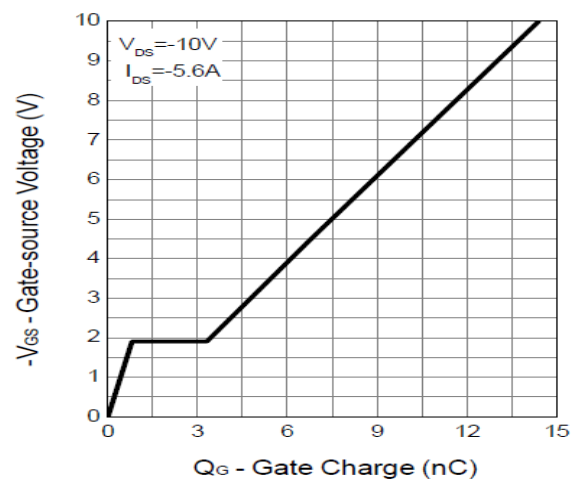
10. Source-Drain Diode Forward



11. Capacitance



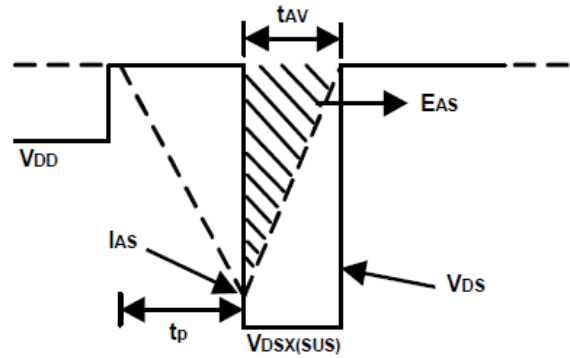
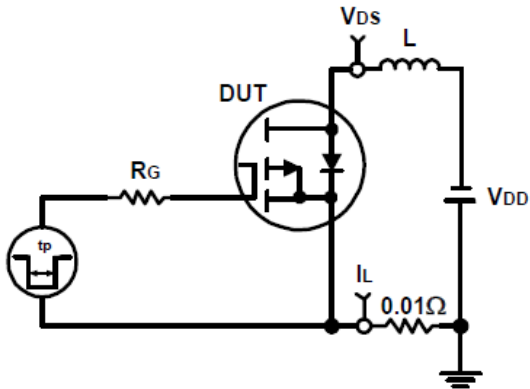
12. Gate Charge



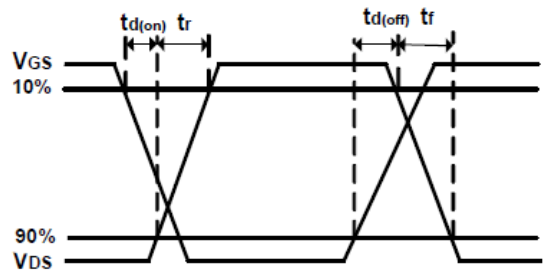
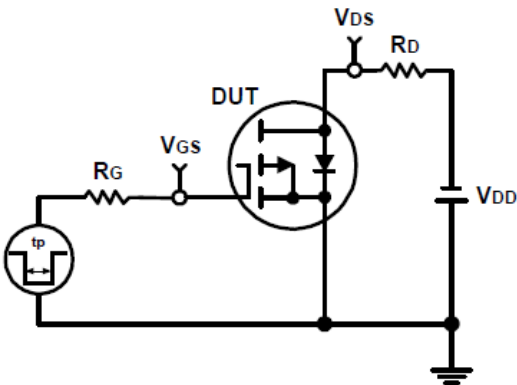


DETAILED INFORMATION

1. Avalanche Test Circuit and Waveforms



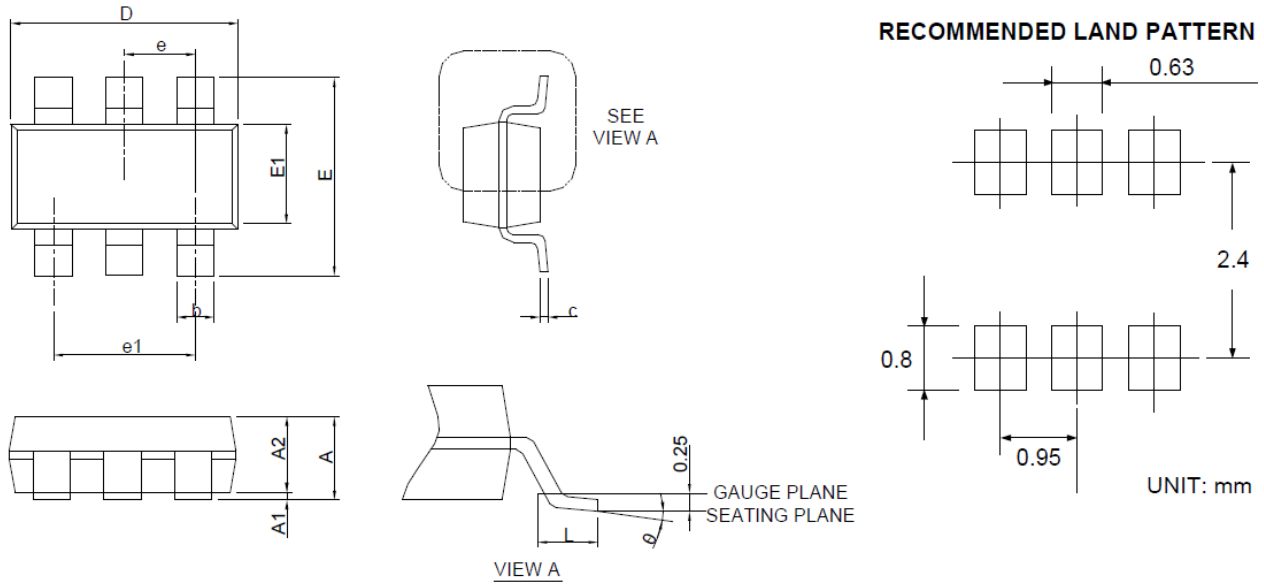
2. Switching Time Test Circuit and Waveforms





PACKAGE INFORMATION

Dimension in SOT-26 Package (Unit: mm)



Symbol	MILLIMETERS		INCHES	
	Min	Max	Min	Max
A	-	1.25	-	0.049
A1	0.00	0.05	0.000	0.002
A1	0.90	1.20	0.035	0.047
b	0.30	0.50	0.012	0.020
c	0.08	0.22	0.003	0.009
D	2.70	3.10	0.106	0.122
E	2.60	3.00	0.102	0.118
E1	1.40	1.80	0.055	0.071
e	0.95 BSC		0.037 BSC	
e1	1.90 BSC		0.075 BSC	
L	0.30	0.60	0.012	0.024
θ	0°	8°	0°	8°



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