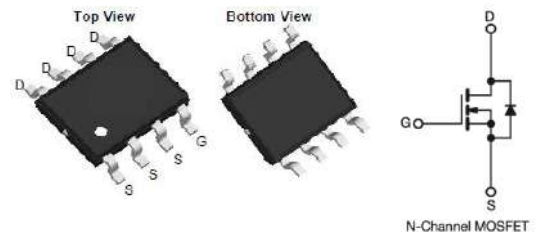


**N-Channel Enhancement Mode Power MOSFET****PRIMARY CHARACTERISTICS**

BV_{DSS}	$R_{DS(on)MAX}$	I_D
100V	12.5m Ω @ $V_{GS}=10V$	10.5A
	17.5m Ω @ $V_{GS}=4.5V$	

SCHEMATIC DIAGRAM**SOP-8 PACKAGE****GENERAL DESCRIPTION**

- load switch
- Power Management
- DC-DC Converter

MECHANICAL DATA

- Case : Molded plastic,SOP-8
- Polarity : Shown above
- Terminals :Plated terminals, solderable per MIL-STD-750,Method 2026
- Epoxy : UL94-V0 rated flame retardant

Absolute Maximum Ratings @ $T_A=25^{\circ}C$ unless otherwise noted

Parameter		Symbol	Ratings	Unit
Drain-Source Voltage		V_{DSS}	100	V
Gate-Source Voltage		V_{GSS}	± 20	V
Drain Current (Continuous) *AC	$T_A=25^{\circ}C$	I_D	10.5	A
	$T_A=70^{\circ}C$		8.4	
Drain Current (Pulse) *B		I_{DM}	45	A
Power Dissipation	$T_A=25^{\circ}C$	P_D	2.5	W
Operating Temperature/ Storage Temperature		T_J/T_{STG}	-55~150	$^{\circ}C$

Thermal Resistance Ratings

Parameter		Symbol	Maximum	Unit
Maximum Junction-to-Ambient	$t \leq 10s$	R_{thJA}	50	$^{\circ}C/W$



N-Channel Enhancement Mode Power MOSFET

Electrical Characteristics @T_A=25°C unless otherwise noted

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Static						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = 250μA	100	--	--	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 80V, V _{GS} = 0V	--	--	1	μA
Gate Threshold Voltage	V _{GS(TH)}	V _{GS} = V _{DS} , I _{DS} = 250μA	1	2.2	3	V
Gate Leakage Current	I _{GSS}	V _{GS} = ±20V, V _{DS} =0V	--	--	±100	nA
Drain-Source On-state Resistance	R _{DS(on)}	V _{GS} = 10V, I _D = 15A	--	9.7	12.5	mΩ
	R _{DS(on)}	V _{GS} = 6V, I _D = 12A	--	11	14.5	mΩ
	R _{DS(on)}	V _{GS} = 4.5V, I _D = 8A	--	13.5	17.5	mΩ
Diode Forward Voltage	V _{SD}	I _{SD} = 1A , V _{GS} =0V	--	0.73	1.2	V
Diode Forward Current *AC	I _S	T _A =25°C	--	--	3.4	A
Switching B						
Total Gate Charge	Q _g	V _{GS} = 10 V, V _{DS} = 50 V, I _{DS} = 20 A	--	33	--	nC
Gate-Source Charge	Q _{gs}		--	8.6	--	nC
Gate-Drain Charge	Q _{gd}		--	7.5	--	nC
Turn-on Delay Time	t _{d (on)}	V _{GS} = 10V, V _{DS} =50V, R _L =5Ω,R _{GEN} =1Ω	--	13	--	ns
Turn-on Rise Time	t _r		--	9	--	ns
Turn-off Delay Time	t _{d(off)}		--	38	--	ns
Turn-Off Fall Time	t _f		--	11	--	ns
Dynamic						
Input Capacitance	C _{iss}	V _{DS} = 50V,V _{GS} =0V, f=1.0MHz	--	1681	--	pF
Output Capacitance	C _{oss}		--	832	--	pF
Reverse Transfer Capacitance	C _{rss}		--	11	--	pF

A: The value of R_{θJA} is measured with the device mounted on 1in² FR-4 board with 2oz. Copper, in a still air environment with T_A=25°C. The value in any given application depends on the user's specific board design.

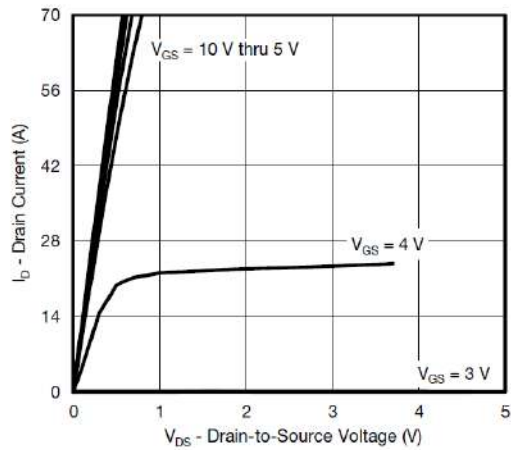
B: Repetitive rating, pulse width limited by junction temperature.

C: The current rating is based on the t_s ≤ 10s junction to ambient thermal resistance rating.

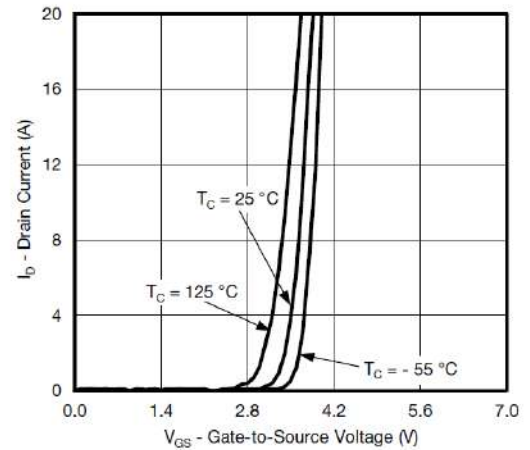


N-Channel Enhancement Mode Power MOSFET

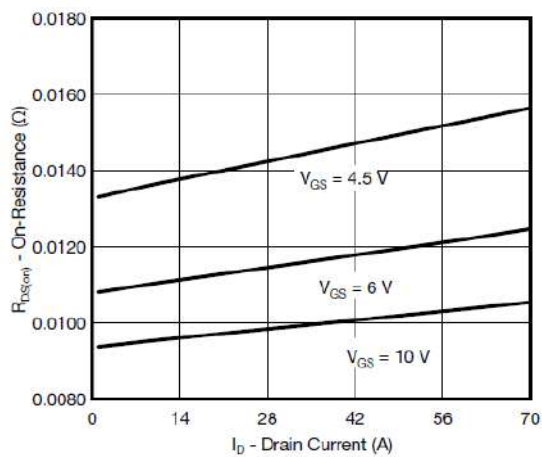
Typical Performance Characteristics (T_J = 25 °C, unless otherwise noted)



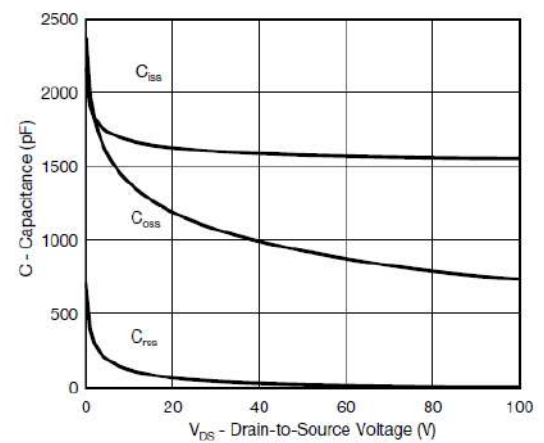
Output Characteristics



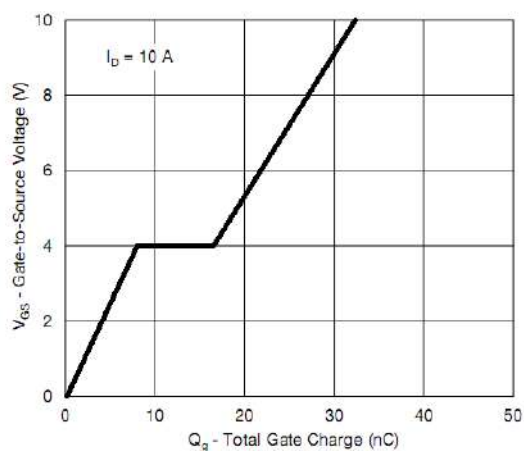
Transfer Characteristics



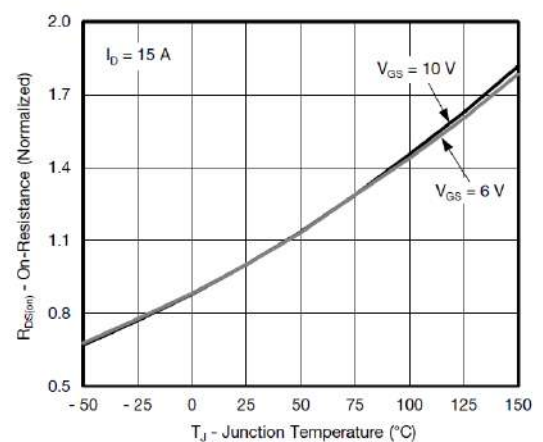
On-Resistance vs. Drain Current



Capacitance



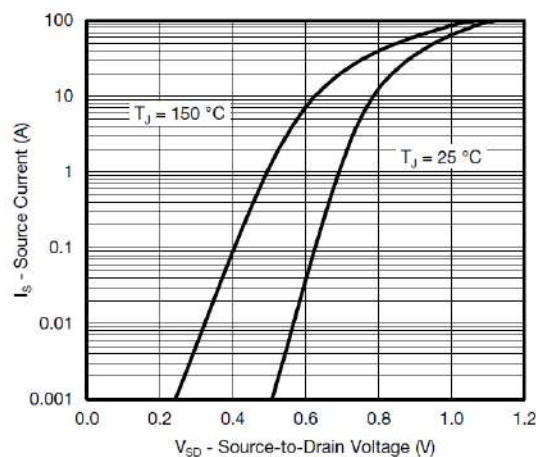
Gate Charge



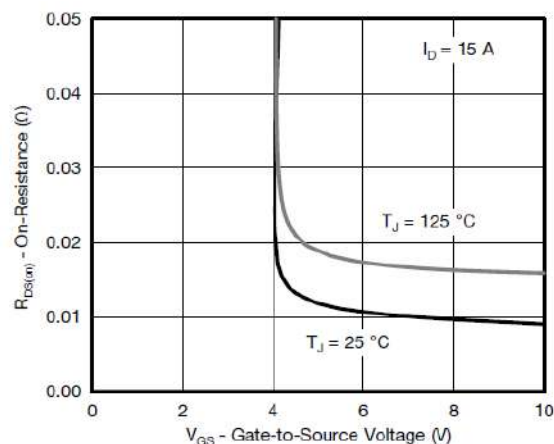
On-Resistance vs. Junction Temperature



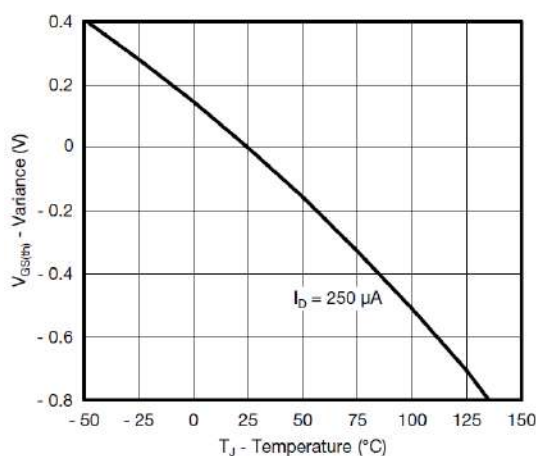
N-Channel Enhancement Mode Power MOSFET



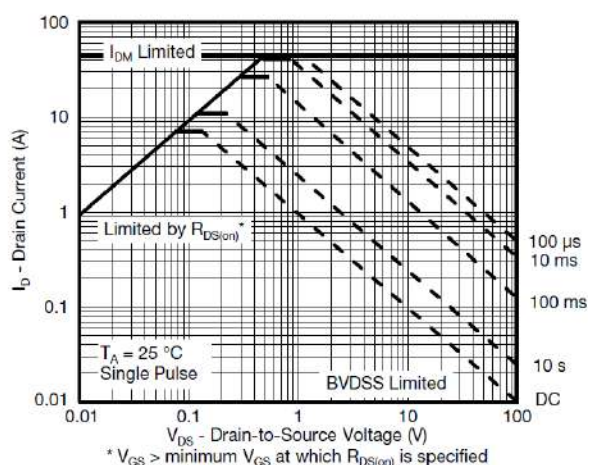
Source-Drain Diode Forward Voltage



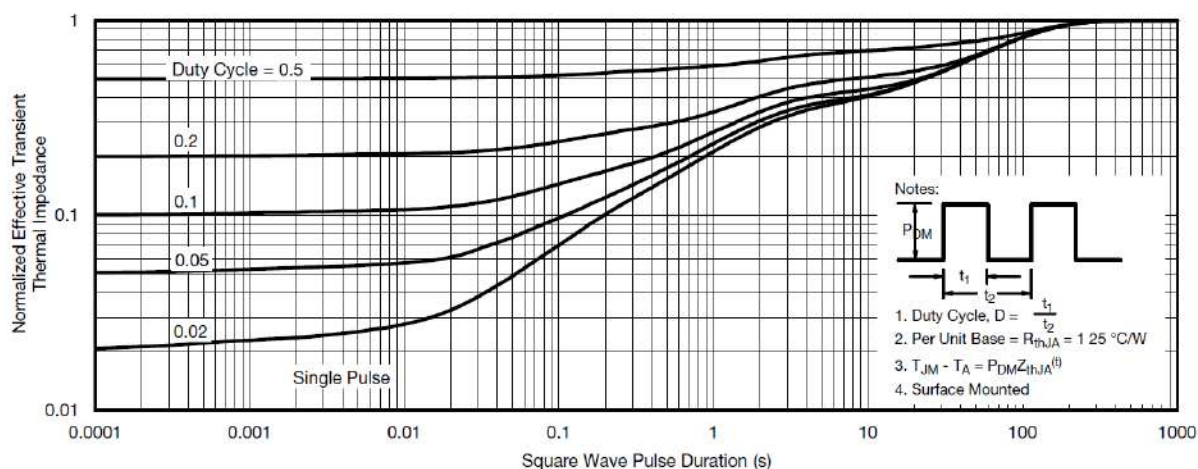
On-Resistance vs. Gate-to-Source Voltage



Threshold Voltage



Safe Operating Area, Junction-to-Ambient

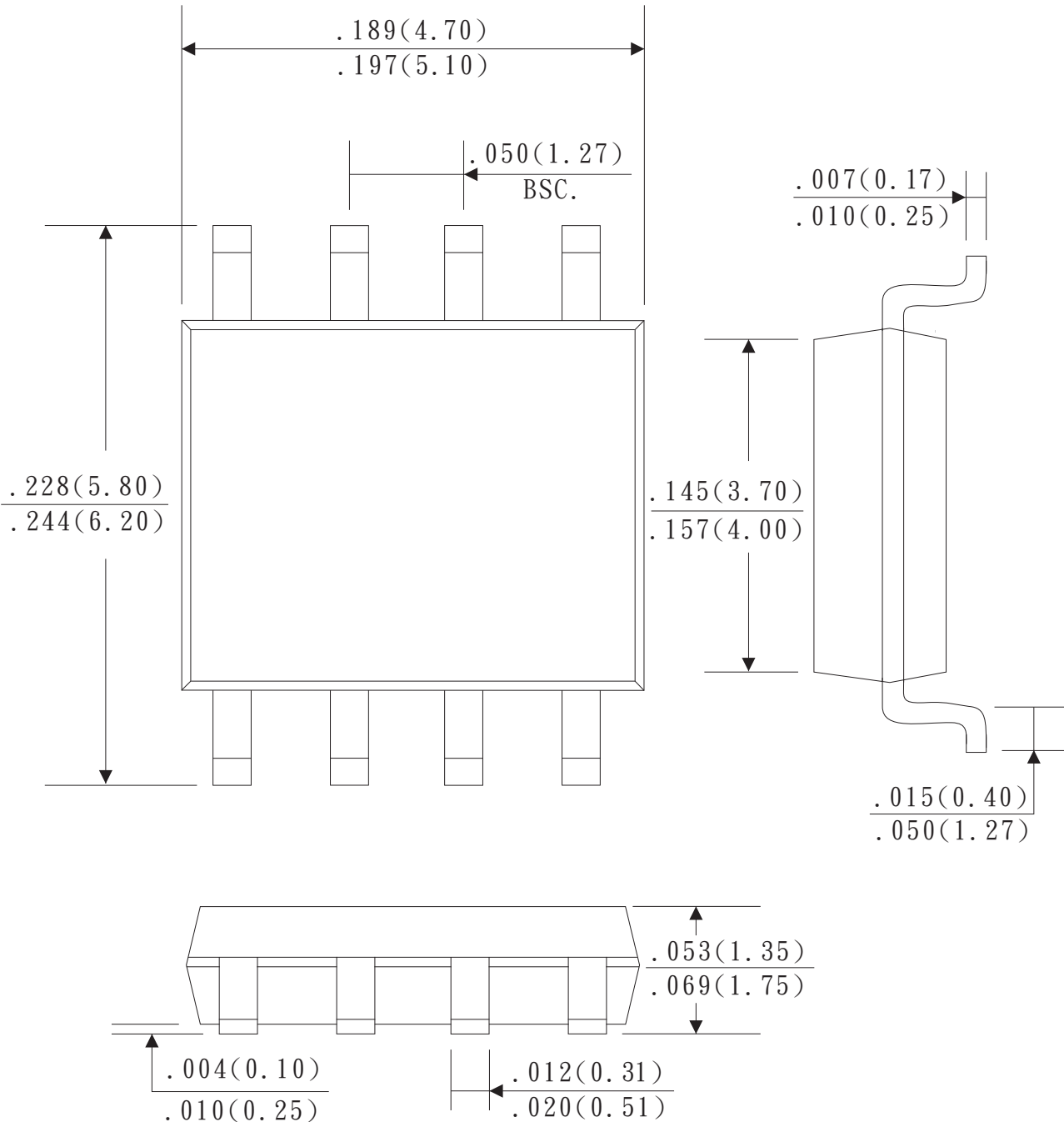


Normalized Thermal Transient Impedance, Junction-to-Ambient



Outline Drawing

SOP-8



Dimensions in inches and (millimeters)

Rev.D

**Ordering Information:**

Device PN	Packing
SEQ1008SQ -T ⁽¹⁾ G ⁽²⁾ - WS ⁽³⁾	Tape&Reel: 3 Kpcs/Reel

Note: (1) Packing code, Tape & Reel Packing

(2) Halogen free product for packing code suffix "H"

(3) WS : Willas brand abbreviation, Label Type does not display

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