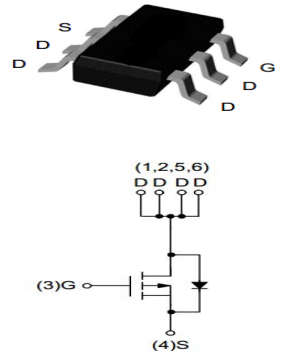
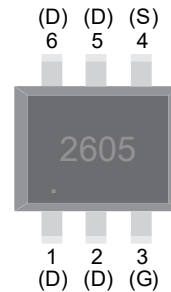


P-Channel High Density Trench MOSFET
PRIMARY CHARACTERISTICS

BV _{DSS}	R _{DS(on)} MAX	I _D
-30V	32mΩ@V _{GS} =-10V	-6A
	47mΩ@V _{GS} =-4.5V	
	65mΩ@V _{GS} =-2.5V	

FEATURES

- Super high dense cell trench design for low R_{DS(on)}.
- Rugged and reliable

SOT-23-6
PACKAGE

MECHANICAL DATA

- Case : Molded plastic, SOT-23-6
- 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 °C unless otherwise noted)

Parameter	Symbol	Limit	Unit
Drain-Source Voltage	V _{DS}	-30	V
Gate-Source Voltage	V _{GS}	± 20	V
Drain Current-Continuous ^a @ T _A = 25 °C -Pulse ^b	I _D	-6	A
	I _{DM}	-24	A
Drain-Source Diode Forward Current ^a	I _S	-2.3	A
Maximum Power Dissipation ^a	P _D	1.25	W
Operating Junction and Storage Temperature Range	T _J , T _{STG}	- 55 to 150	°C

THERMAL CHARACTERISTICS

Parameter	Symbol	Typ ^c	Max	Unit
Thermal Resistance, Junction-to-Ambient ^a	R _{thJA}	75	100	°C/W

Note :

a. Surface Mounted on FR4 Board , t ≤ 5sec .

b. Pulse Test Pulse width ≤ 300us , Duty Cycle ≤ 2% .



P-Channel High Density Trench MOSFET

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

Parameter	Symbol	Condition	Min	Typ ^c	Max	Unit
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} = 0V , I _D = -250uA	- 30			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -20V , V _{GS} = 0V			-1	uA
Gate-Body Leakage	I _{GSS}	V _{GS} = -12V , V _{DS} = 0V			-100	nA
ON CHARACTERISTICS ^b						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250uA	-1	-1.5	-2	V
Drain-Source On-State Resistance	R _{DS(on)}	V _{GS} = -10V , I _D = -4.2A		25	32	mΩ
		V _{GS} = -4.5V , I _D = -4.0A		38	47	mΩ
		V _{GS} = -2.5V , I _D = -1.0A		52	65	mΩ
DRAIN-SOURCE DIODE CHARACTERISTICS ^b						
Diode Forward Voltage	V _{SD}	V _{GS} = 0V , I _S = -1.0A		-0.8	-1.3	V
DYNAMIC CHARACTERISTICS ^c						
Input Capacitance	C _{ISS}	V _{DS} = 15V , V _{GS} = 0V f = 1.0MHz		1278		pF
Output Capacitance	C _{OSS}			423		pF
Reverse Transfer Capacitance	C _{RSS}			189		pF
SWITCHING CHARACTERISTICS ^c						
Turn-On Delay Time	t _{D(ON)}	V _{DD} = -15V , I _D = -1A V _{GEN} = -4.5V R _L = 15 Ω R _{GEN} = 10 Ω		38		ns
Rise Time	t _r			8		ns
Turn-Off Delay Time	t _{D(OFF)}			13		ns
Fall Time	t _f			7.8		ns
Total Gate Charge	Q _g	V _{DS} = -15V I _D = -1A V _{GS} = -10V		12.7		nC
Gate-Source Charge	Q _{gs}			5.1		nC
Gate-Drain Charge	Q _{gd}			4.2		nC

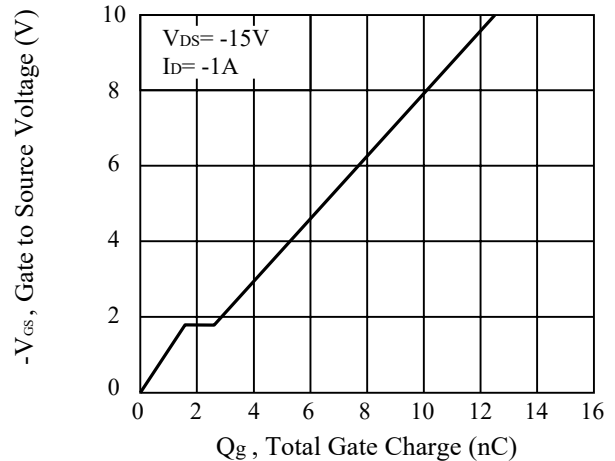
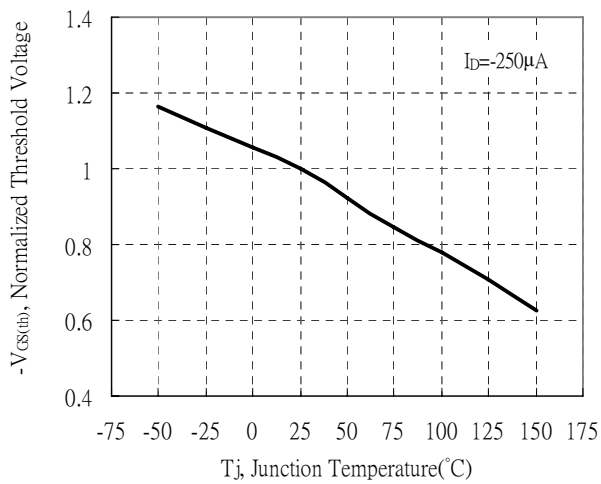
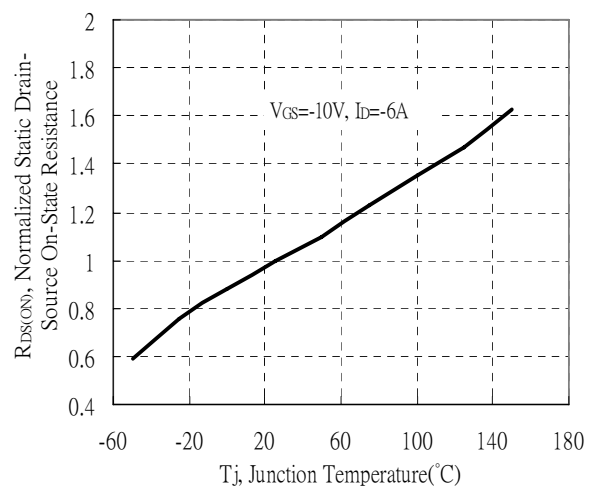
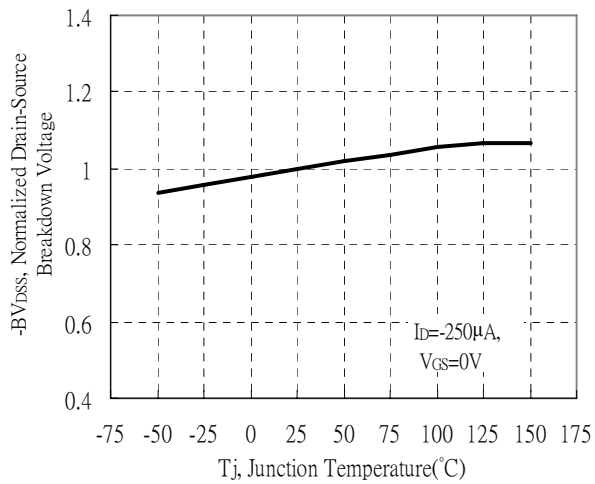
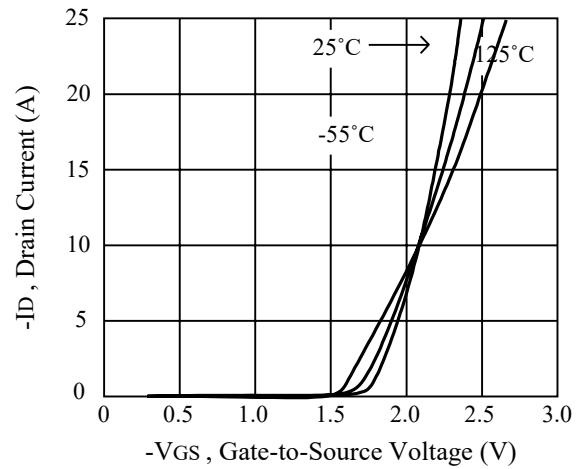
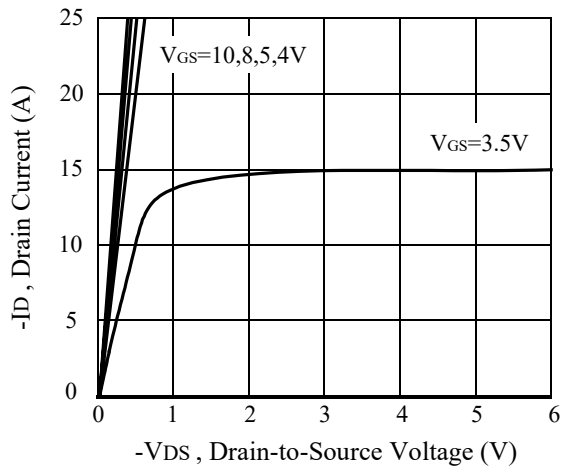
Not^g :

b. Pulse Test : Pulse width ≤ 300us , Duty Cycle ≤ 2% .

c. Guaranteed by design , not subject to production testing.

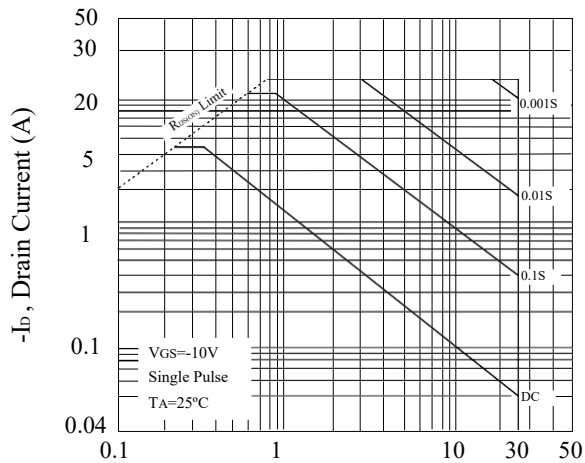


P-Channel High Density Trench MOSFET



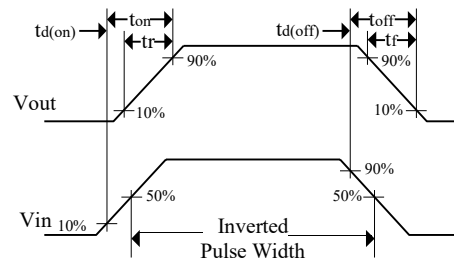
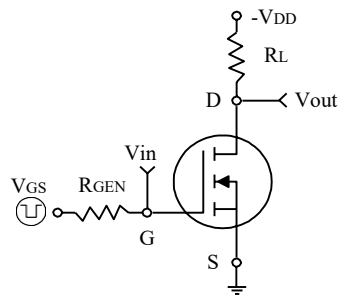
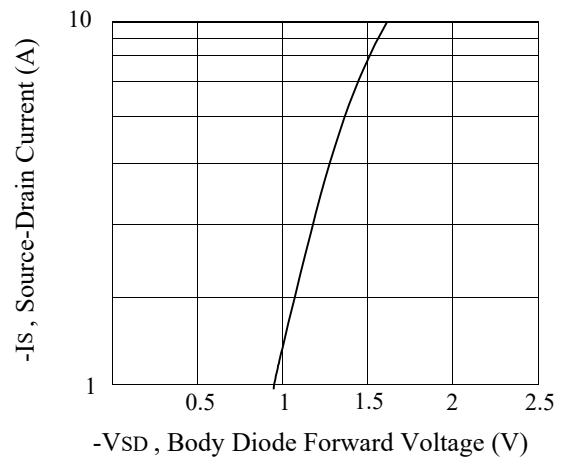


P-Channel High Density Trench MOSFET

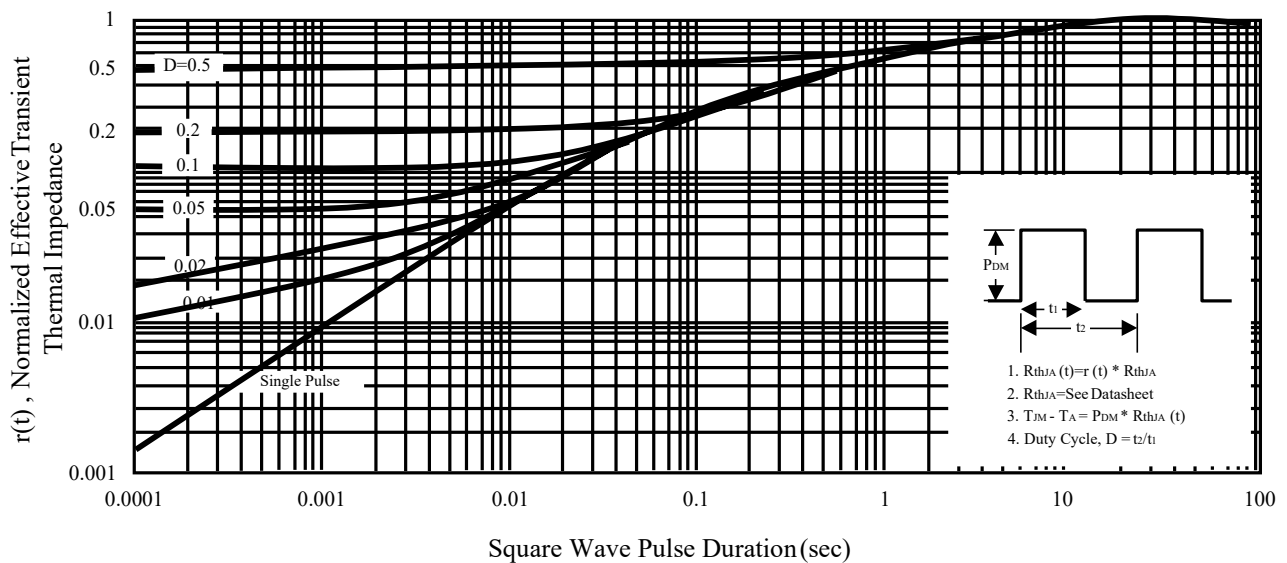


- V_{DS} , Drain-Source Voltage (V)

Maximum Safe Operating Area



Switching Test Circuit and Switching Waveforms

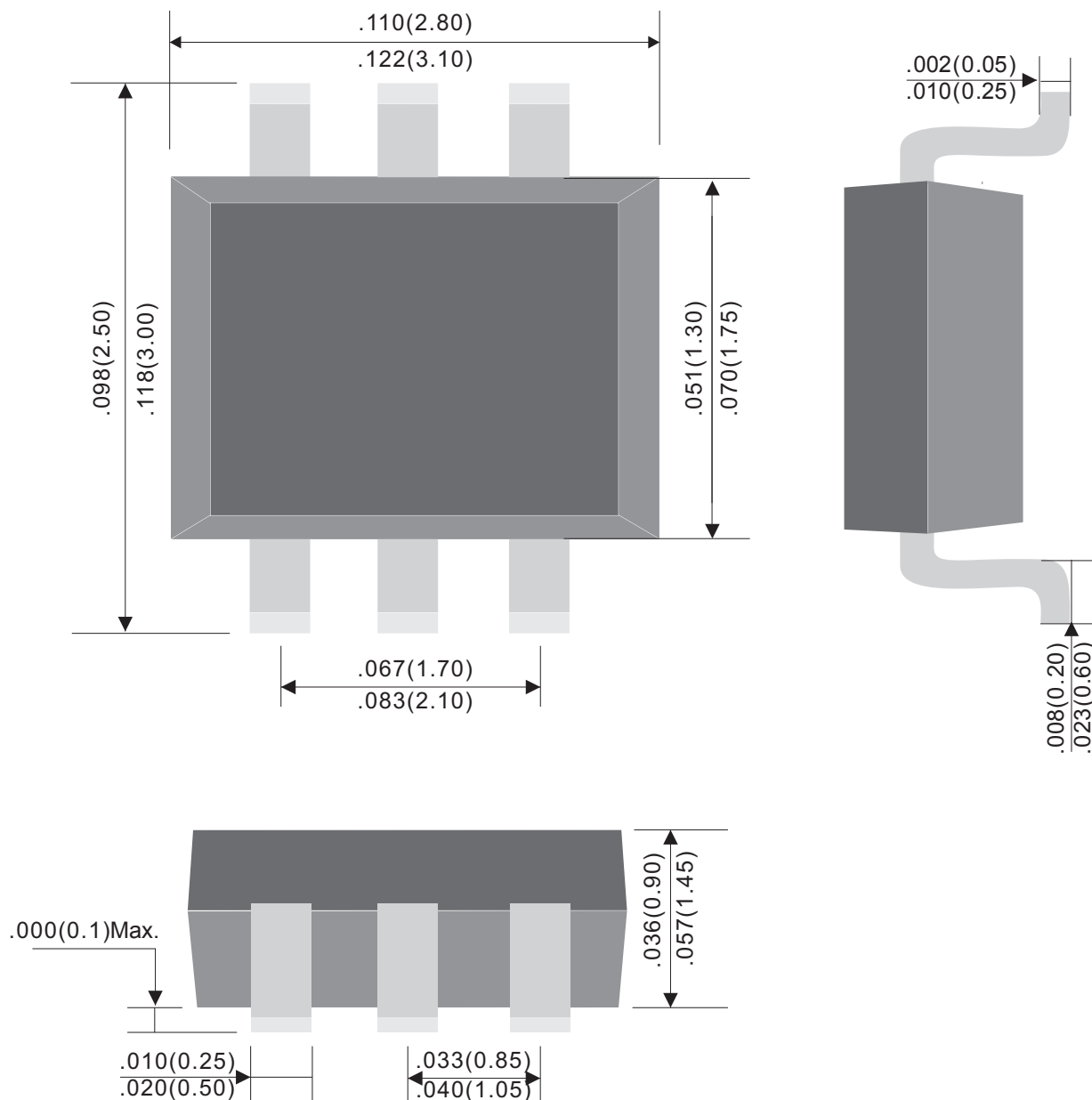


Normalized Thermal Transient Impedance Curve



Outline Drawing

SOT-23-6



Dimensions in inches and (millimeters)

Rev.D

P-Channel High Density Trench MOSFET**Ordering Information:**

Device PN	Packing
SET2605 -T ⁽¹⁾ H ⁽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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