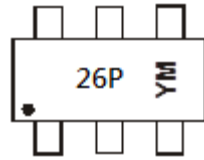


Marking Information

TSOT26



Shanghai A/T Site

26P = Product Type Marking Code
 YM = Date Code Marking for SAT (Shanghai Assembly/Test Site)
 Y or Y = Year (ex: H = 2020)
 M = Month (ex: 9 = September)

Date Code Key

Year	2013	...	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Code	A	...	H	I	J	K	L	M	N	O	P	R

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Drain-Source Voltage	V _{DSS}	-20	V
Gate-Source Voltage	V _{GSS}	±8	V
Drain Current (Note 5) Continuous	I _D	T _A = +25°C	-4.5
		T _A = +70°C	-3.7
Pulsed Drain Current (10μs Pulse, Duty Cycle = 1%)	I _{DM}	-20	A
Body-Diode Continuous Current (Note 5)	I _S	-2.0	A

Thermal Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic		Symbol	Value	Unit
Total Power Dissipation (Note 5)		P _D	1.2	W
Thermal Resistance, Junction to Ambient (Note 5)	Steady State	R _{θJA}	100	°C/W
	t<10s		74	
Total Power Dissipation (Note 6)		P _D	1.8	W
Thermal Resistance, Junction to Ambient (Note 6)	Steady State	R _{θJA}	70	°C/W
	t<10s		46	
Operating and Storage Temperature Range		T _J , T _{STG}	-55 to +150	°C

Notes: 5. Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.
 6. Device mounted on FR-4 substrate PC board, 2oz copper, with 1inch square copper plate.

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
STATIC PARAMETERS (Note 7)						
Drain-Source Breakdown Voltage	BV _{DSS}	-20	—	—	V	I _D = -250μA, V _{GS} = 0V
Zero Gate Voltage Drain Current @ T _J = +55°C (Note 8)	I _{DSS}	—	—	-1 -10	μA	V _{DS} = -16V, V _{GS} = 0V V _{DS} = -16V, V _{GS} = 0V
Zero Gate Voltage Drain Current @ T _J = +150°C (Note 8)	I _{DSS}	—	—	-100	μA	V _{DS} = -16V, V _{GS} = 0V
Gate-Body Leakage Current	I _{GSS}	—	—	±100	nA	V _{DS} = 0V, V _{GS} = ±8V
Gate Threshold Voltage	V _{GS(TH)}	-0.4	—	-1.5	V	V _{DS} = V _{GS} , I _D = -250μA
Static Drain-Source On-Resistance	R _{DS(ON)}	—	25 33	45 65	mΩ	V _{GS} = -4.5V, I _D = -4.5A V _{GS} = -2.5V, I _D = -3.8A
Static Drain-Source On-Resistance @ T _J = +125°C (Note 8)	R _{DS(ON)}	—	—	72	mΩ	V _{GS} = -4.5V, I _D = -4.5A
Diode Forward Voltage	V _{SD}	-0.5	-0.72	-1.4	V	I _S = -2.1A, V _{GS} = 0V
On State Drain Current (Note 8)	I _{D(ON)}	10	—	—	A	V _{DS} ≤ 5V, V _{GS} = 4.5V
DYNAMIC PARAMETERS (Note 8)						
Input Capacitance	C _{iss}	—	1,496	2,990	pF	V _{DS} = -15V, V _{GS} = 0V f = 1.0MHz
Output Capacitance	C _{oss}	—	130	260	pF	
Reverse Transfer Capacitance	C _{rss}	—	116	230	pF	
Total Gate Charge	Q _G	—	14.4	25	nC	V _{DS} = -10V, V _{GS} = -4.5V, I _D = -4.5A
Gate-Source Charge	Q _{GS}	—	2.6	5		
Gate-Drain Charge	Q _{GD}	—	2.7	5.5		
Turn-On Delay Time	t _{D(ON)}	—	8.5	30	ns	V _{DS} = -5V, V _{GS} = -4.5V, I _D = -1A, R _G = 6.0Ω
Rise Time	t _R	—	11	60		
Turn-Off Delay Time	t _{D(OFF)}	—	61	130		
Fall Time	t _F	—	25	100		

Notes: 7. Short duration pulse test used to minimize self-heating effect.
 8. Guaranteed by design. Not subject to product testing.

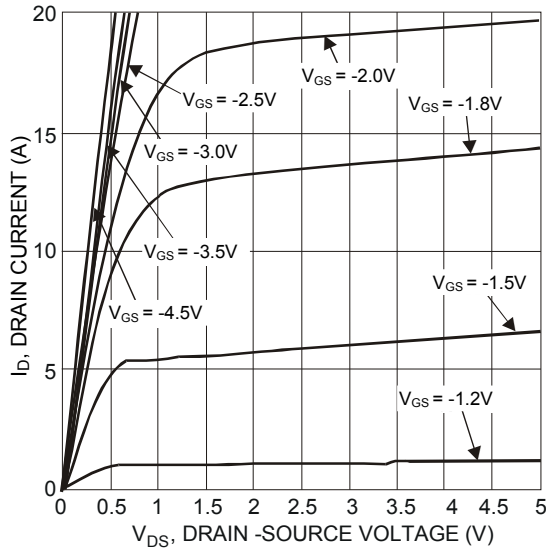


Figure 1 Typical Output Characteristics

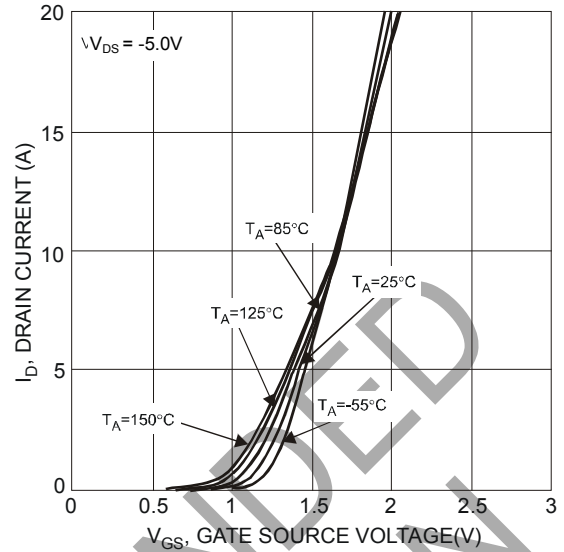


Figure 2 Typical Transfer Characteristics

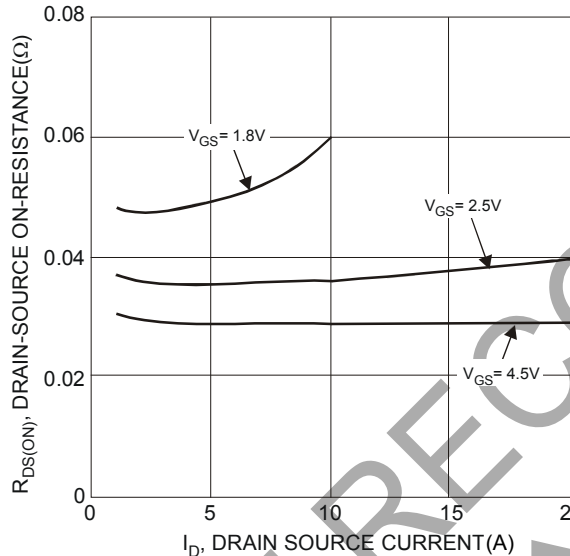


Figure 3 Typical On-Resistance vs. Drain Current and Gate Voltage

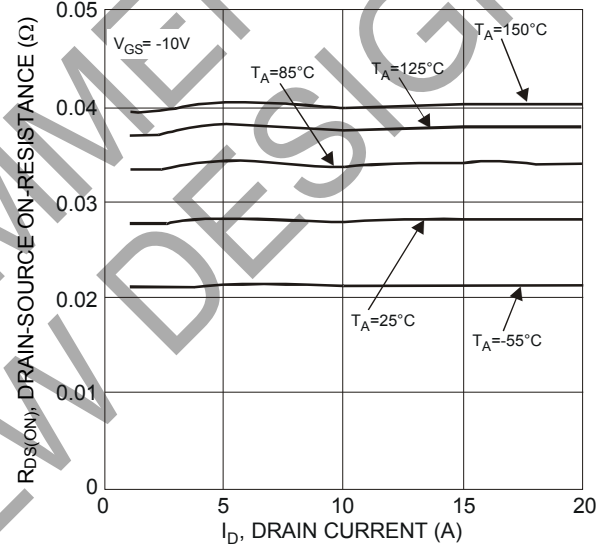


Figure 4 Typical On-Resistance vs. Drain Current and Temperature

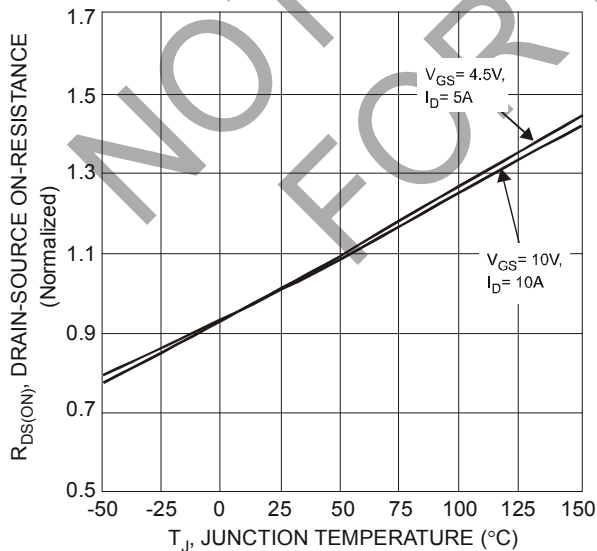


Figure 5 On-Resistance Variation with Temperature

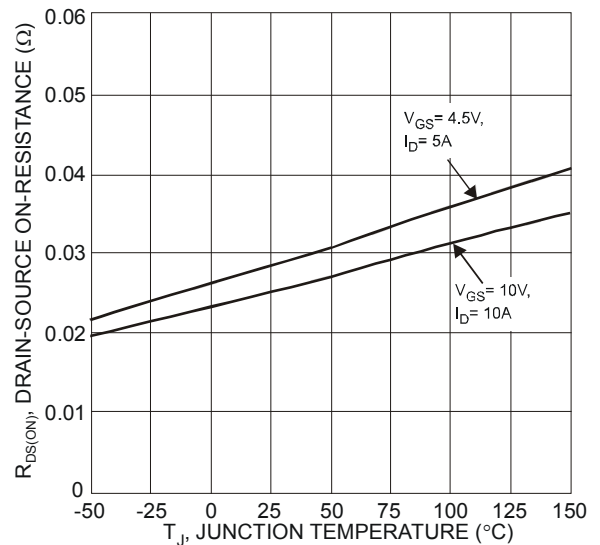


Figure 6 On-Resistance Variation with Temperature

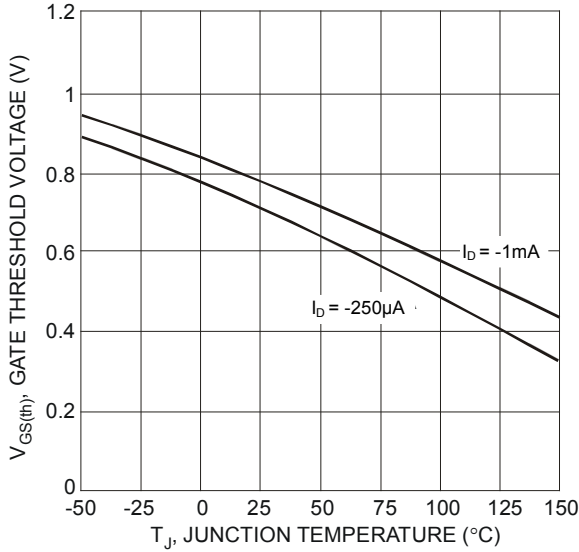


Figure 7 Gate Threshold Variation vs. Junction Temperature

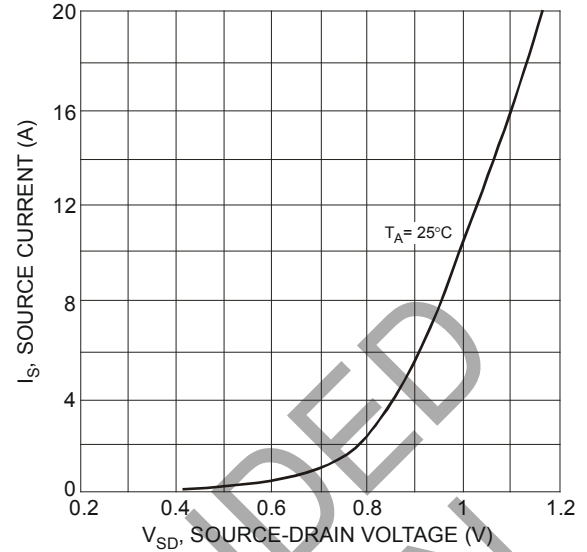


Figure 8 Diode Forward Voltage vs. Current

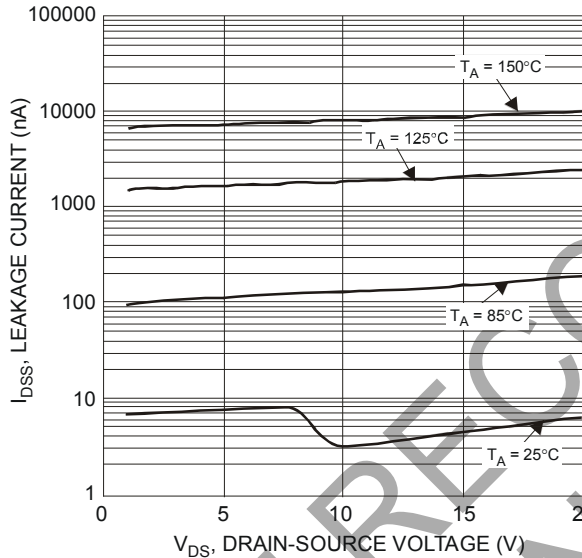


Figure 9 Typical Drain-Source Leakage Current vs. Voltage

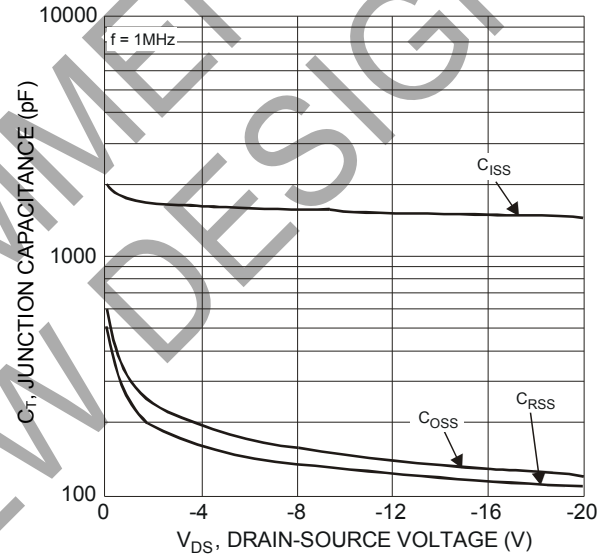


Figure 10 Typical Junction Capacitance

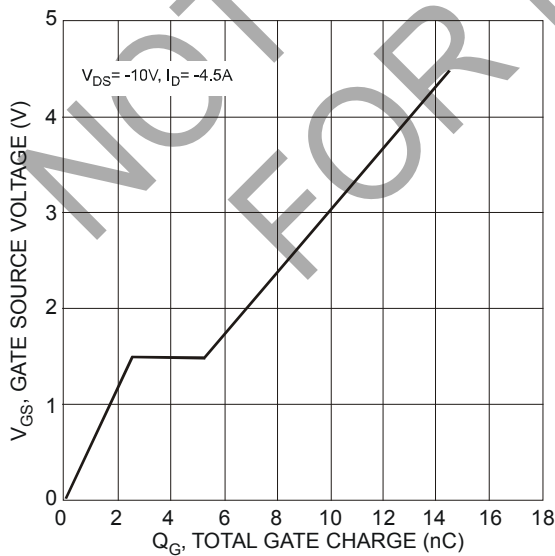
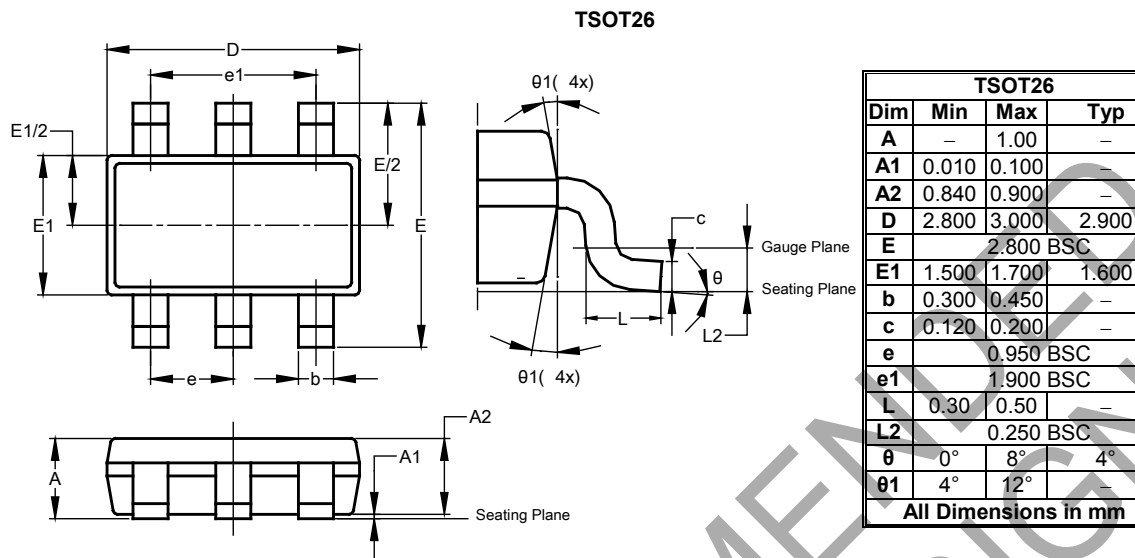


Figure 11 Gate Charge Characteristics

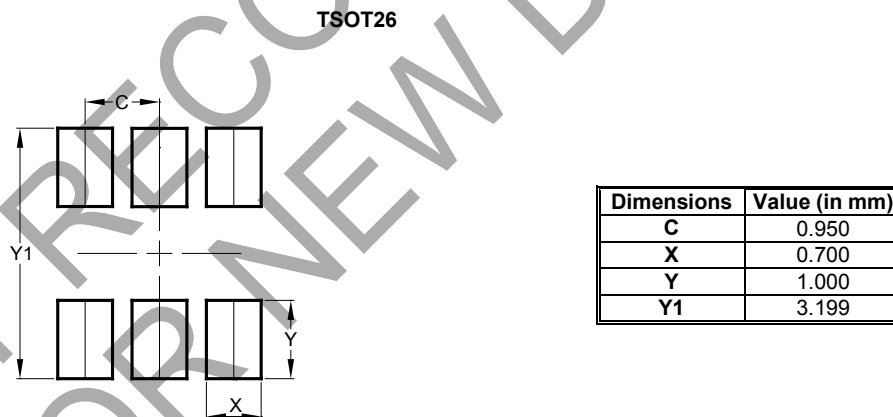
Package Outline Dimensions

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