



Dual P-Channel 1.8-V (G-S) MOSFET

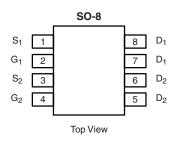
PRODUCT SUMMARY				
V _{DS} (V)	$R_{DS(on)}(\Omega)$	I _D (A)		
- 12	0.023 at V _{GS} = - 4.5 V	- 7.5		
	0.030 at V _{GS} = - 2.5 V	- 6.7		
	0.045 at V _{GS} = - 1.8 V	- 5.4		

FEATURES

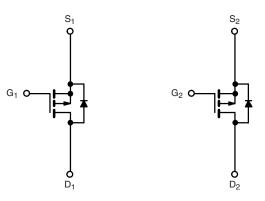
- Halogen-free According to IEC 61249-2-21 Definition
- TrenchFET® Power MOSFETs: 1.8 V Rated
- Compliant to RoHS Directive 2002/95/EC







Ordering Information: Si4967DY-T1-E3 (Lead (Pb)-free) Si4967DY-T1-GE3 (Lead (Pb)-free and Halogen-free)



P-Channel MOSFET

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ABSOLUTE MAXIMUM RATINGS	T _A = 25 °C, unles	ss otherwise not	ed	
Parameter		Symbol	Limit	Unit
Drain-Source Voltage		V _{DS}	- 12	
Gate-Source Voltage		V _{GS}	± 8	
Continuous Drain Current (T _J = 150 °C) ^{a, b}	T _A = 25 °C	1	- 7.5	
	T _A = 70 °C	I _D	- 6.1	_
Pulsed Drain Current		I _{DM}	- 30	A
Continuous Source Current (Diode Conduction) ^{a, b}		I _S	- 1.7	
a h	T _A = 25 °C	D ₋	2.0	10/
Maximum Power Dissipation ^{a, b}	T _A = 70 °C	P _D	1.3	W
Operating Junction and Storage Temperature Range		T _J , T _{stg}	- 55 to 150	°C

THERMAL RESISTANCE RATINGS						
Parameter		Symbol	Typical	Maximum	Unit	
Mariana Landian La Andria II	t ≤ 10 s	R _{thJA}		62.5	°C/W	
Maximum Junction-to-Ambient ^a	Steady State	' 'thJA	93		C/VV	

Notes:

a. Surface Mounted on FR4 board.

 $b.\ t \leq 10\ s.$

Si4967DY

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Parameter	Symbol	Test Conditions Min		Тур.	Max.	Unit	
Static							
Gate Threshold Voltage	V _{GS(th)}	$V_{DS} = V_{GS}, I_{D} = -250 \mu A$	- 0.45			V	
Gate-Body Leakage	I _{GSS}	$V_{DS} = 0 \text{ V}, V_{GS} = \pm 8 \text{ V}$			± 100	nA	
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = - 12 V, V _{GS} = 0 V		- 1	μΑ		
		V _{DS} = - 12 V, V _{GS} = 0 V, T _J = 70 °C				- 5	
On-State Drain Current ^a	I _{D(on)}	$V_{DS} \ge$ - 5 V, V_{GS} = - 4.5 V	- 20			Α	
Drain-Source On-State Resistance ^a	R _{DS(on)}	$V_{GS} = -4.5 \text{ V}, I_D = -7.5 \text{ A}$		0.019	0.023	Ω	
		$V_{GS} = -2.5 \text{ V}, I_D = -6.7 \text{ A}$		0.024	0.030		
		$V_{GS} = -1.8 \text{ V}, I_D = -5.4 \text{ A}$		0.033	0.045		
Forward Transconductance ^a	9 _{fs}	V _{DS} = - 10 V, I _D = - 7.5 A		27		S	
Diode Forward Voltage ^a	V_{SD}	I _S = - 1.7 A, V _{GS} = 0 V		- 0.7	- 1.2	V	
Dynamic ^b			•	•			
Total Gate Charge	Q_g			35	55		
Gate-Source Charge	Q_{gs}	V _{DS} = -6 V, V _{GS} = -10 V, I _D = -7.5 A		7		nC	
Gate-Drain Charge	Q_{gd}			7			
Turn-On Delay Time	t _{d(on)}			25	50		
Rise Time	t _r	V_{DD} = - 6 V, R_L = 10 Ω		40	80		
Turn-Off Delay Time	t _{d(off)}	$I_D\cong$ - 1 A, $V_{GEN}=$ - 10 V, $R_g=6~\Omega$		210	350	ns	
Fall Time	t _f			95	150		
Source-Drain Reverse Recovery Time	t _{rr}	I _E = - 1.7 A, dI/dt = 100 A/μs		50	80		

Notes:

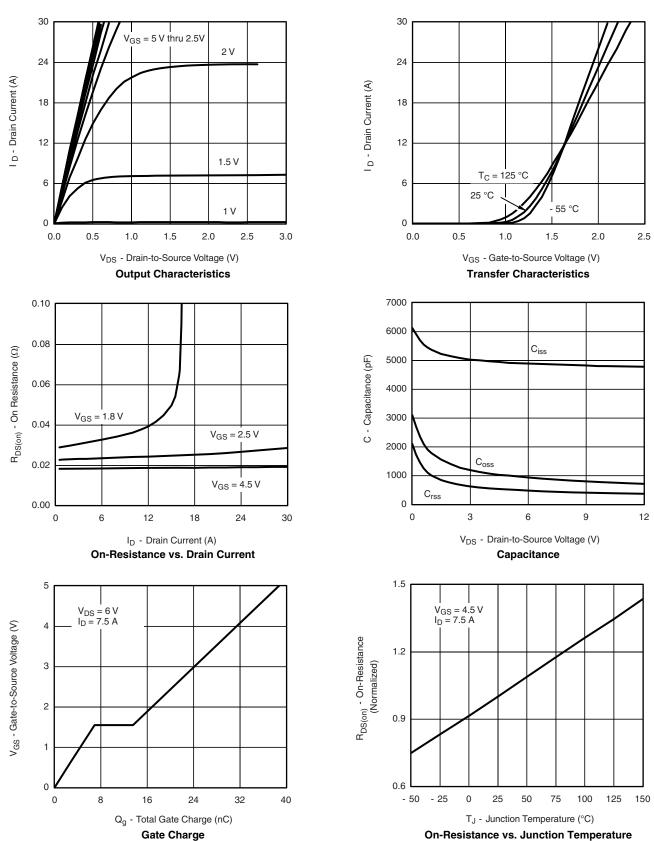
Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

a. Pulse test; pulse width \leq 300 $\mu s,$ duty cycle \leq 2 %. b. Guaranteed by design, not subject to production testing.





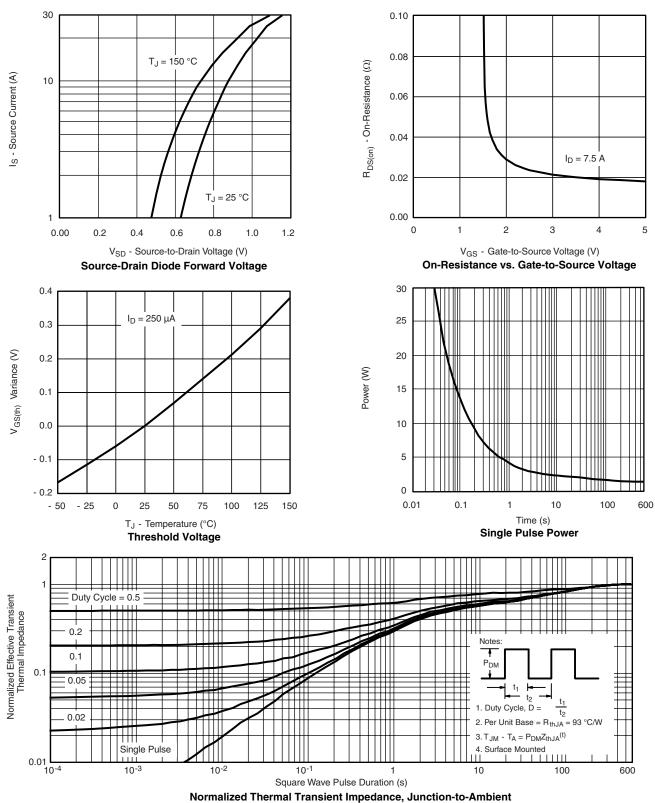
TYPICAL CHARACTERISTICS 25 °C, unless otherwise noted



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