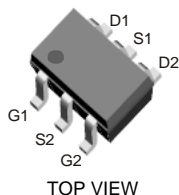


Features

- Low On-Resistance
 - 55 mΩ @ $V_{GS} = 4.5V$
 - 70 mΩ @ $V_{GS} = 2.5V$
 - 90 mΩ @ $V_{GS} = 1.8V$
 - 130 mΩ @ $V_{GS} = 1.5V$
- Low Gate Threshold Voltage
- Low Input Capacitance
- Fast Switching Speed
- ESD Protected Gate
- **Lead Free By Design/RoHS Compliant (Note 2)**
- **"Green" Device (Note 3)**
- **Qualified to AEC-Q101 Standard for High Reliability**

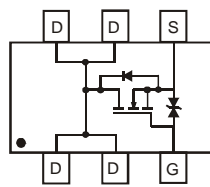


ESD PROTECTED



TOP VIEW

SOT-26



TOP VIEW

Internal Schematic

Maximum Ratings @ $T_A = 25^\circ C$ unless otherwise specified

Characteristic	Symbol	Value	Units
Drain-Source Voltage	V_{DSS}	20	V
Gate-Source Voltage	V_{GSS}	± 8	V
Drain Current (Note 1)	I_D	3.3	A
Pulsed Drain Current (Note 1)	I_{DM}	13	A

Thermal Characteristics @ $T_A = 25^\circ C$ unless otherwise specified

Characteristic	Symbol	Value	Units
Total Power Dissipation (Note 1)	P_D	900	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	139	$^\circ C/W$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ C$

Electrical Characteristics @ $T_A = 25^\circ C$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 4)						
Drain-Source Breakdown Voltage	BV_{DSS}	20	—	—	V	$V_{GS} = 0V, I_D = 250\mu A$
Zero Gate Voltage Drain Current	I_{DSS}	—	—	1	μA	$V_{DS} = 20V, V_{GS} = 0V$
Gate-Source Leakage	I_{GSS}	—	—	± 1	μA	$V_{GS} = \pm 8V, V_{DS} = 0V$
ON CHARACTERISTICS (Note 4)						
Gate Threshold Voltage	$V_{GS(th)}$	0.6	—	1.0	V	$V_{DS} = V_{GS}, I_D = 250\mu A$
Static Drain-Source On-Resistance	$R_{DS(ON)}$	—	32	55	mΩ	$V_{GS} = 4.5V, I_D = 6A$
			43	70		$V_{GS} = 2.5V, I_D = 4.0A$
			56	90		$V_{GS} = 1.8V, I_D = 1.5A$
			80	130		$V_{GS} = 1.5V, I_D = 1.0A$
Forward Transfer Admittance	$ Y_{fs} $	—	8	—	S	$V_{DS} = 10V, I_D = 6A$
Diode Forward Voltage (Note 4)	V_{SD}	—	0.7	1.1	V	$V_{GS} = 0V, I_S = 2A$
DYNAMIC CHARACTERISTICS						
Input Capacitance	C_{iss}	—	555	—	pF	$V_{DS} = 10V, V_{GS} = 0V$ $f = 1.0MHz$
Output Capacitance	C_{oss}	—	112	—	pF	
Reverse Transfer Capacitance	C_{rss}	—	84	—	pF	

- Notes:
1. Device mounted on FR-4 PCB, or minimum recommended pad layout with 2oz. copper pads.
 2. No purposefully added lead.
 3. Detail go to our website at www.twtysemi.com
 4. Short duration pulse test used to minimize self-heating effect.