

Features

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

Mechanical Data

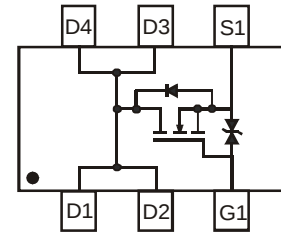
- Case: SOT-26
- Case Material: Molded Plastic, "Green" Molding Compound.
UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminal Connections: See Diagram
- Terminals: Finish — Matte Tin annealed over Copper leadframe.
Solderable per MIL-STD-202, Method 208
- Weight: 0.015 grams (approximate)



SOT-26



Top View

Top View
Internal Schematic

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

Characteristic	Symbol	Value	Units
Drain-Source Voltage	V_{DSS}	30	V
Gate-Source Voltage	V_{GSS}	± 8	V
Drain Current (Note 1)	I_D	3.2	A
Pulsed Drain Current (Note 1)	I_{DM}	12.8	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}	30	—	—	V	$V_{GS} = 0V, I_D = 100\mu A$
Zero Gate Voltage Drain Current	I_{DSS}	—	—	1	μA	$V_{DS} = 30V, V_{GS} = 0V$
Gate-Source Leakage	I_{GSS}	—	—	± 5	μA	$V_{GS} = \pm 8V, V_{DS} = 0V$
ON CHARACTERISTICS (Note 4)						
Gate Threshold Voltage	$V_{GS(th)}$	0.5	—	1.0	V	$V_{DS} = V_{GS}, I_D = 250\mu A$
Static Drain-Source On-Resistance	$R_{DS(on)}$	—	40	60	mΩ	$V_{GS} = 4.5V, I_D = 6A$
			50	80		$V_{GS} = 2.5V, I_D = 2A$
			76	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}	—	476	—	pF	$V_{DS} = 15V, V_{GS} = 0V$ $f = 1.0MHz$
Output Capacitance	C_{oss}	—	77	—	pF	
Reverse Transfer Capacitance	C_{rss}	—	59	—	pF	

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