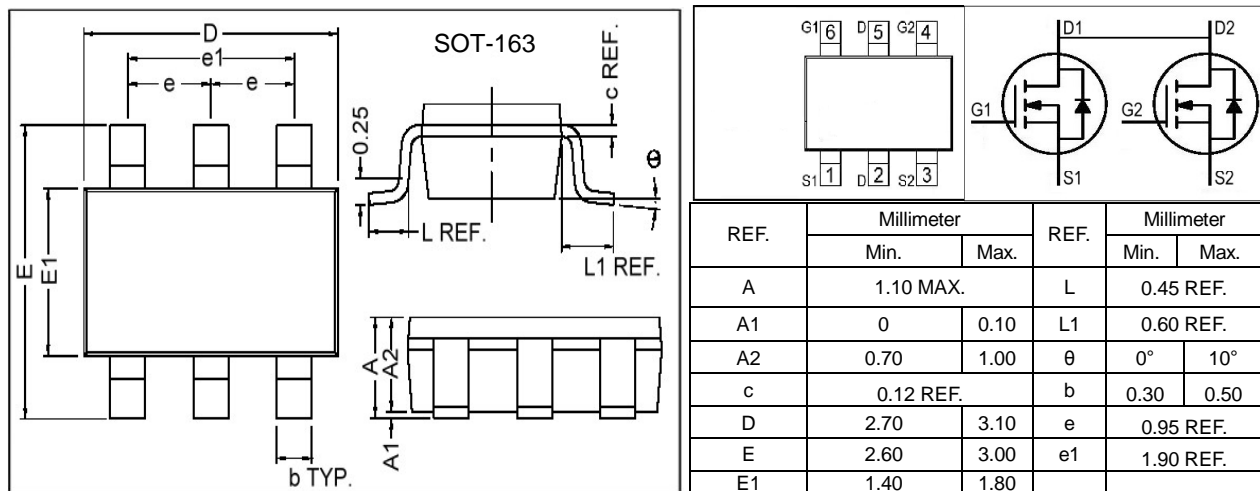


20V Dual N-Channel Enhancement Mode MOSFET
VDS= 20V
RDS(ON), Vgs@2.5V, Ids@3.4A < 46mΩ
RDS(ON), Vgs@4.V, Ids@4.3A < 30mΩ
Features

- Advanced trench process technology
- High Density Cell Design For Ultra Low On-Resistance
- High Power and Current handing capability
- Ideal for Li ion battery pack applications

Package Dimensions

Maximum Ratings and Thermal Characteristics (TA = 25°C unless otherwise noted)

Parameter	Symbol	Limit	Unit	
Drain-Source Voltage	V _{DS}	20	V	
Gate-Source Voltage	V _{GS}	± 12		
Continuous Drain Current	I _D	4	A	
Pulsed Drain Current ¹⁾	I _{DM}	25		
Maximum Power Dissipation	P _D	TA = 25°C	1.4	W
		TA = 75°C	1	
Operating Junction and Storage Temperature Range	T _J , T _{stg}	-55 to 150	°C	
Junction-to-Ambient Thermal Resistance (PCB mounted) ²⁾	R _{θJA}	100	°C/W	

Notes

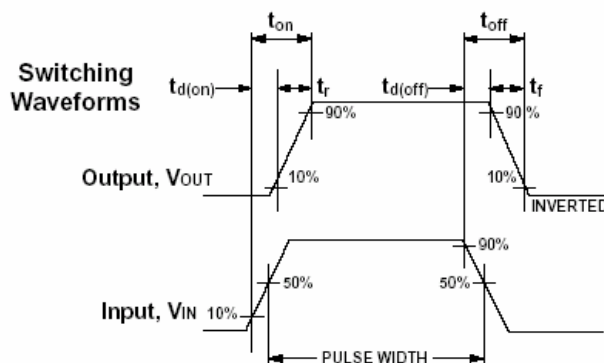
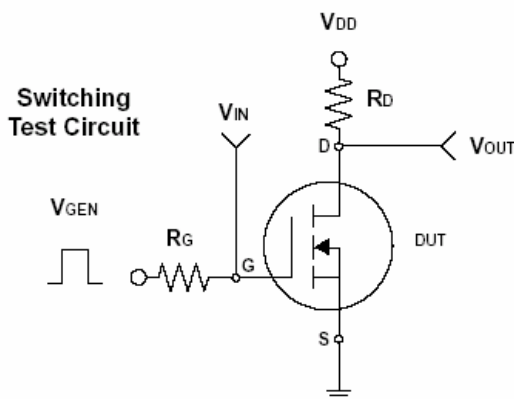
- ¹⁾ Pulse width limited by maximum junction temperature.
- ²⁾ Surface Mounted on FR4 Board, t ≤ 5 sec.

20V Dual N-Channel Enhancement Mode MOSFET

ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static						
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS} = 0V, I_D = 250\mu A$	20			V
Drain-Source On-State Resistance	$R_{DS(on)}$	$V_{GS} = 2.5V, I_D = 3.4A$		35	46	mΩ
Drain-Source On-State Resistance	$R_{DS(on)}$	$V_{GS} = 4.0V, I_D = 4.3A$		27	30	
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	0.5	0.8	1.5	V
Zero Gate Voltage Drain Current 0	I_{DSS}	$V_{DS} = 16V, V_{GS} = 0V$			1	μA
Gate Body Leakage	I_{GSS}	$V_{GS} = \pm 8V, V_{DS} = 0V$			±100	nA
Forward Transconductance	g_{fs}	$V_{DS} = 5V, I_D = 4A$		10	—	S
Dynamic						
Total Gate Charge	Q_g	$V_{DS} = 10V, I_D = 4A$ $V_{GS} = 4V$		11		nC
Gate-Source Charge	Q_{gs}			2.2		
Gate-Drain Charge	Q_{gd}			2.5		
Turn-On Delay Time	$t_{d(on)}$	$V_{DD} = 10V, R_G = 10\Omega$ $I_D = 1A, V_{GS} = 4V$		18.3		ns
Turn-On Rise Time	t_r			4.8		
Turn-Off Delay Time	$t_{d(off)}$			43.5		
Turn-Off Fall Time	t_f			20		
Input Capacitance	C_{iss}	$V_{DS} = 8V, V_{GS} = 0V$ $f = 1.0\text{ MHz}$		800		pF
Output Capacitance	C_{oss}			155		
Reverse Transfer Capacitance	C_{rss}			125		
Source-Drain Diode						
Max. Diode Forward Current	I_S			2		A
Diode Forward Voltage	V_{SD}	$I_S = 1.7A, V_{GS} = 0V$		0.8	1.2	V

Note: Pulse test: pulse width ≤ 300μs, duty cycle ≤ 2%



20V Dual N-Channel Enhancement Mode MOSFET

Typical Characteristics (T_J = 25°C Noted)

