

Features

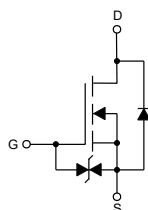
- Operated at Low Logic Level Gate Drive
- N-Channel Switch with Low $R_{DS(on)}$
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

- Operating Junction Temperature Range: -55°C to $+150^{\circ}\text{C}$
- Storage Temperature Range: -55°C to $+150^{\circ}\text{C}$
- Maximum Thermal Resistance: 1250°C/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Drain -source Voltage	V_{DS}	20	V
Gate -Source Voltage	V_{GS}	± 12	V
Drain Current-Continuous ^(Note 1)	I_D	0.75	A
Pulsed Drain Current	I_{DM}	1.8	A
Power Dissipation ^(Note 2)	P_D	0.10	W

Internal Structure

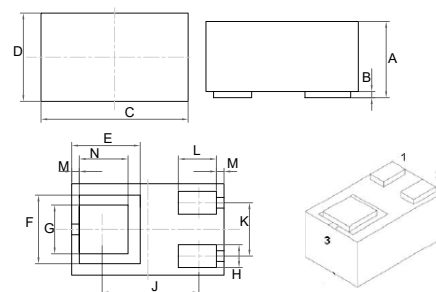


1. GATE
2. SOURCE
3. DRAIN

Marking:34

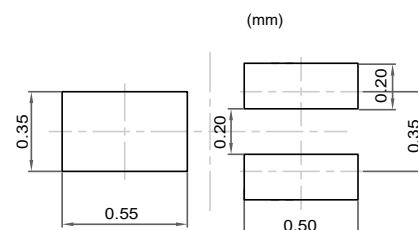
N-Channel MOSFET

SOT-883



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.018	0.022	0.45	0.55	
B	0.000	0.004	0.01	0.10	
C	0.037	0.041	0.95	1.05	
D	0.022	0.026	0.55	0.65	
E	0.018		0.450		TYP.
F	0.018		0.450		TYP.
G	0.011	0.015	0.27	0.37	
H	0.004	0.008	0.10	0.20	
J	0.025		0.635		TYP.
K	0.012	0.016	0.30	0.40	
L	0.008	0.012	0.20	0.30	
M	0.002		0.050		TYP.
N	0.011	0.015	0.27	0.37	

Suggested Solder Pad Layout



ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, I _D =250μA	20			V
Gate-Threshold Voltage ^(Note 2)	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.35		1.1	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =20V, V _{GS} =0V			1.0	μA
Gate-body Leakage Current	I _{GSS}	V _{GS} =± 10V, V _{DS} =0V			±20	μA
Drain-Source On-Resistance ^(Note 2)	R _{DS(on)}	V _{GS} =4.5V, I _D =650mA			0.38	Ω
		V _{GS} =2.5V, I _D =550mA			0.45	
		V _{GS} =1.8V, I _D =450mA			0.80	
Forward transconductance ^(Note 2)	g _{FS}	V _{DS} =10V, I _D =800mA		1.6		S
Diode Forward Voltage	V _{SD}	V _{GS} =0V, I _S =150mA			1.2	V
Dynamic Characteristics ^(Note 4)						
Input Capacitance	C _{iss}	V _{DS} =16V,V _{GS} =0V, f=1MHz		79	120	pF
Output Capacitance	C _{oss}			13	20	
Reverse Transfer Capacitance	C _{rss}			9	15	
Switching Characteristics ^(Note 4)						
Turn-on Delay Time ^(Note 3)	t _{d(on)}	V _{DS} =10V,V _{GS} =4.5V,I _D =500 mA, R _{GEN} =10Ω		6.7		ns
Turn-off Delay Time ^(Note 3)	t _{d(off)}			17.3		
Rise Time ^(Note 3)	t _r			4.8		
Fall Time ^(Note 3)	t _f			7.4		

Notes :

1. Surface Mounted On FR4 Board Using The Minimum Recommended Pad Size.
2. Pulse Test : Pulse width $\leq 300\mu s$, duty cycles $\leq 2\%$.
3. Switching Characteristics are Independent of Operating Junction Temperatures.
4. Guaranteed by Design, Not Subject to Production testing.

Curve Characteristics

Fig. 1 - Output Characteristics

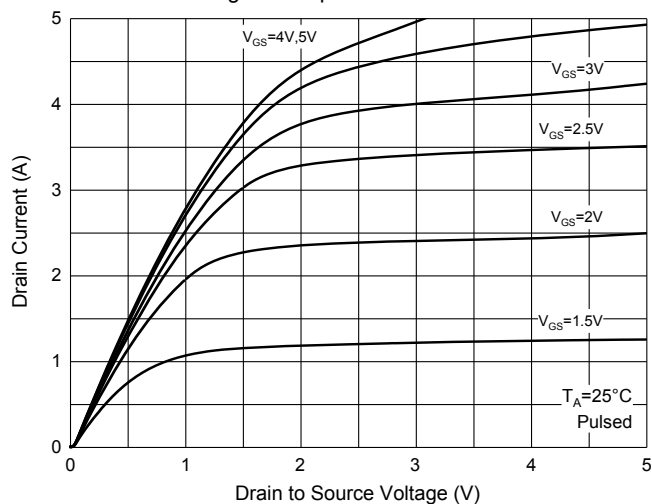


Fig. 2 - Transfer Characteristics

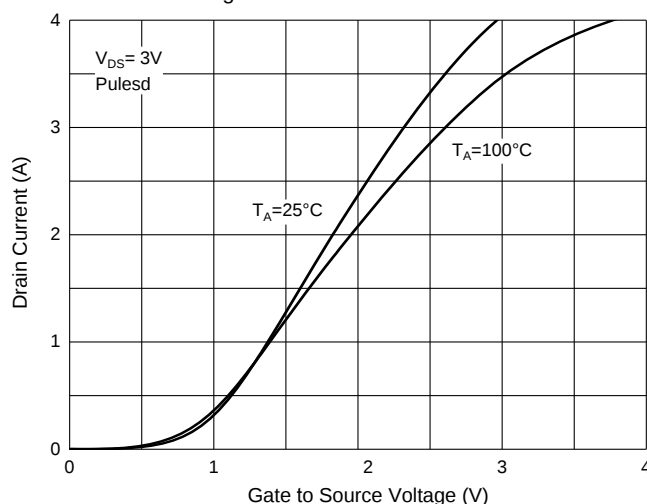


Fig. 3 - $R_{DS(ON)} - I_D$

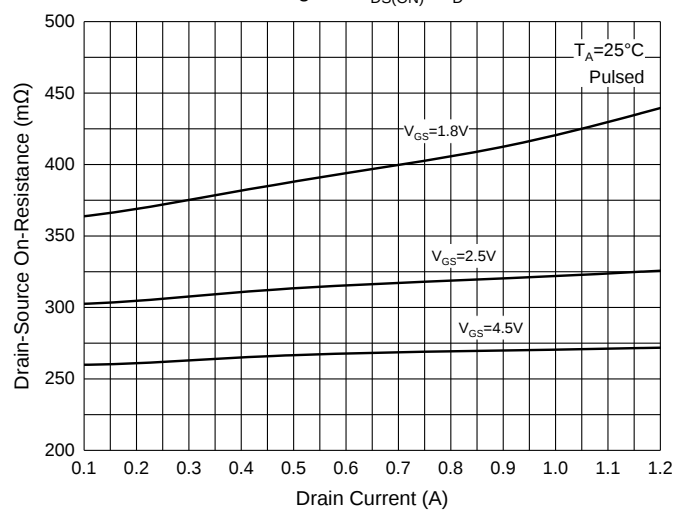


Fig. 4 - $R_{DS(ON)} - V_{GS}$

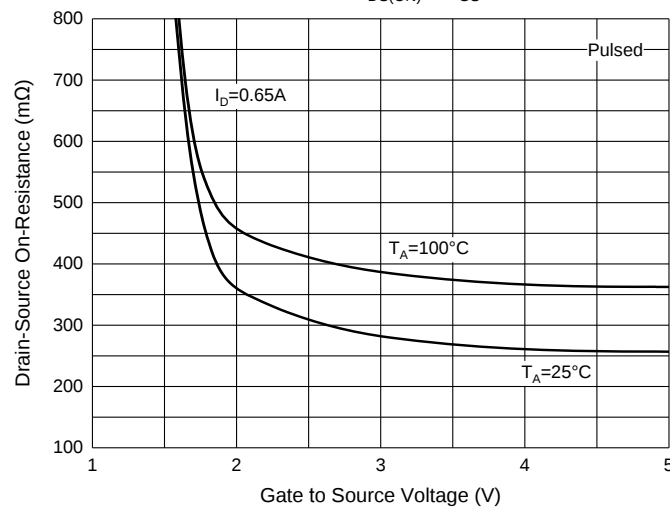


Fig. 5 - $I_S - V_{SD}$

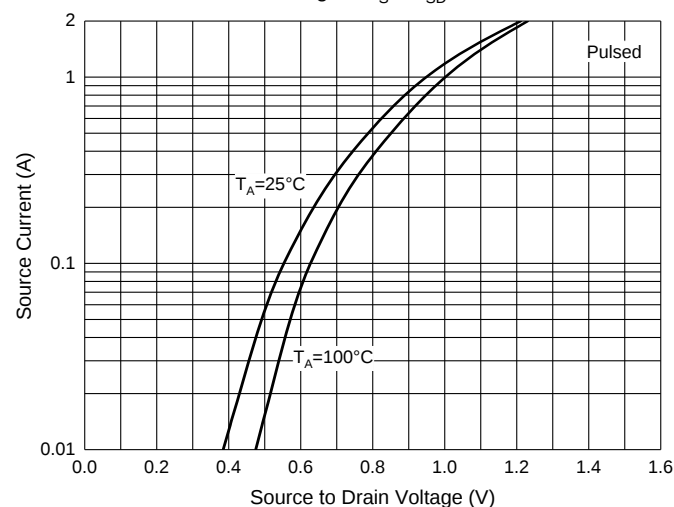
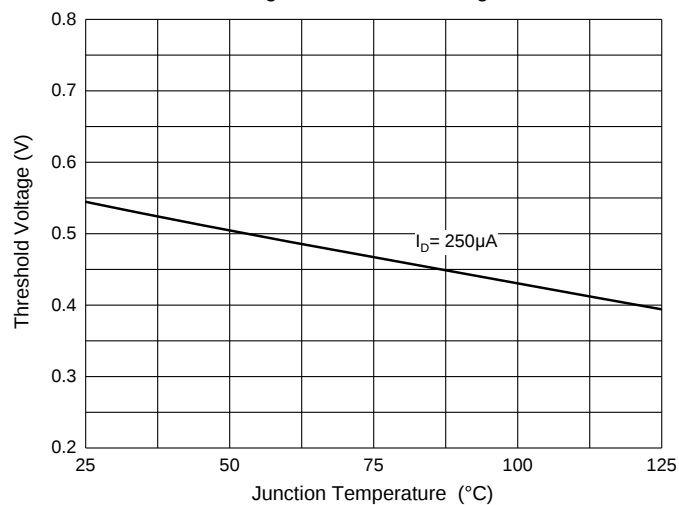


Fig. 6 - Threshold Voltage



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:10Kpcs/Reel

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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