

Features

- High Density Cell Design for Ultra Low $R_{DS(on)}$
- Rugged and Reliable
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

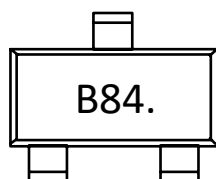
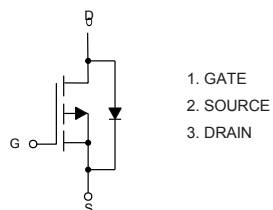
Maximum Ratings

- Operating Junction Temperature Range : -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 556°C/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-60	V
Gate-Source Voltage	V_{GS}	±30	V
Continuous Drain Current	I_D	-0.17	A
Pulsed Drain Current	I_{DM}	-0.68	A
Total Power Dissipation	P_D	225	mW

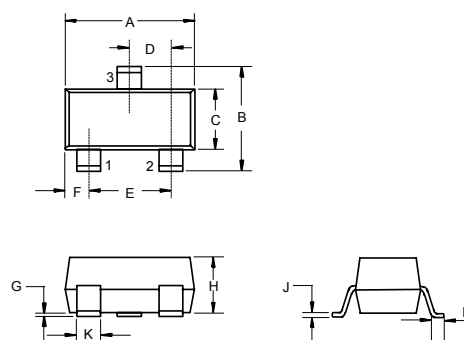
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure and Marking Code



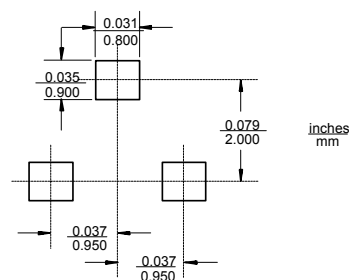
P-CHANNEL MOSFET

SOT-23



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.110	0.120	2.80	3.04	
B	0.083	0.104	2.10	2.64	
C	0.047	0.055	1.20	1.40	
D	0.034	0.041	0.85	1.05	
E	0.067	0.083	1.70	2.10	
F	0.018	0.024	0.45	0.60	
G	0.0004	0.006	0.01	0.15	
H	0.035	0.043	0.90	1.10	
J	0.003	0.007	0.08	0.18	
K	0.012	0.020	0.30	0.51	
L	0.007	0.020	0.20	0.50	

Suggested Solder Pad Layout



Electrical Characteristics @ 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	-60			V
Gate-Source Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±30V			±500	nA
		V _{DS} =0V, V _{GS} =±20V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-60V, V _{GS} =0V			-5	μA
		V _{DS} =-25V, V _{GS} =0V			-0.1	μA
Gate-Threshold Voltage ^(Note 2)	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250μA	-0.9		-2	V
Drain-Source On-Resistance ^(Note2)	R _{DS(on)}	V _{GS} =-5V, I _D =-0.1A			10	Ω
		V _{GS} =-10V, I _D =-0.1A			8	
Diode Forward Voltage ^(Note 2)	V _{SD}	V _{GS} =0V, I _S =-0.17A			-2.2	V
Forward Transconductance ^(Note 2)	g _{FS}	V _{DS} =-25V, I _D =-100mA	50			mS
Dynamic Characteristics ^(Note3)						
Input Capacitance	C _{iss}	V _{DS} =-25V,V _{GS} =0V,f=1MHz		30		pF
Output Capacitance	C _{oss}			10		
Reverse Transfer Capacitance	C _{rss}			5		
Switching Characteristics ^(Note3)						
Turn-On Delay Time	t _{d(on)}	V _{DS} =-25V, V _{GS} =0V, I _D =-10mA, f=10kHz		15		ns
Turn-On Rise Time	t _r			5		
Turn-Off Delay Time	t _{d(off)}			15		
Turn-Off Fall Time	t _f			5		

Note: 2. Pulse Test : Pulse Width $\leq 80\mu s$, Duty Cycle $\leq 0.5\%$.

3. Guaranteed by Design, Not Subject to Production Testing.

Curve Characteristics

Fig. 1 - Output Characteristics

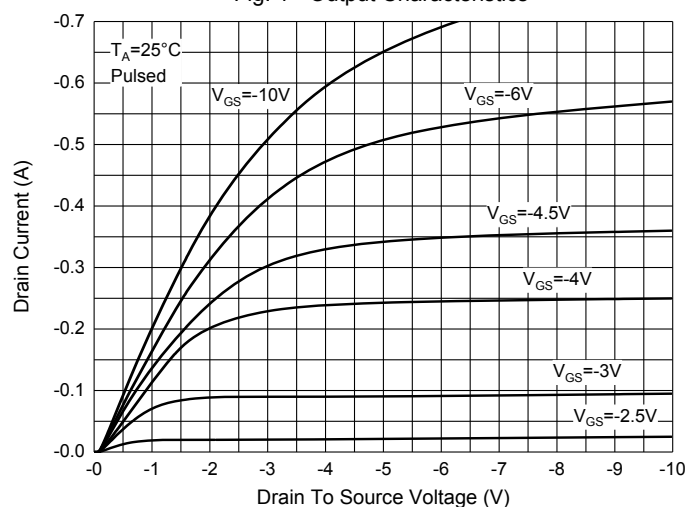


Fig. 2 - Transfer Characteristics

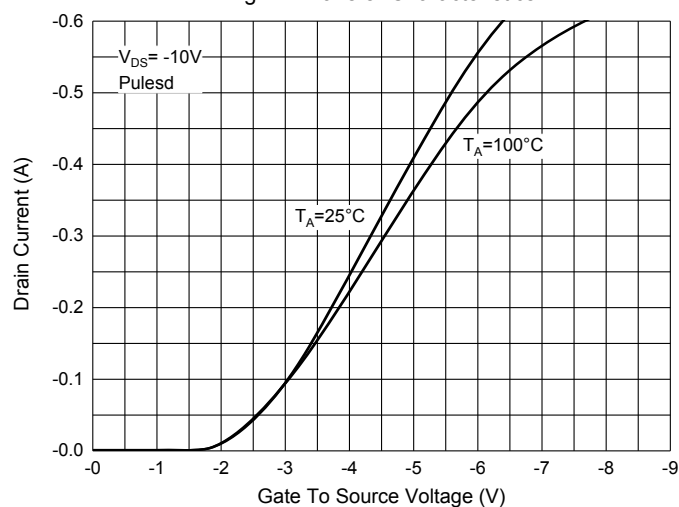


Fig. 3 - $R_{DS(ON)} - I_D$

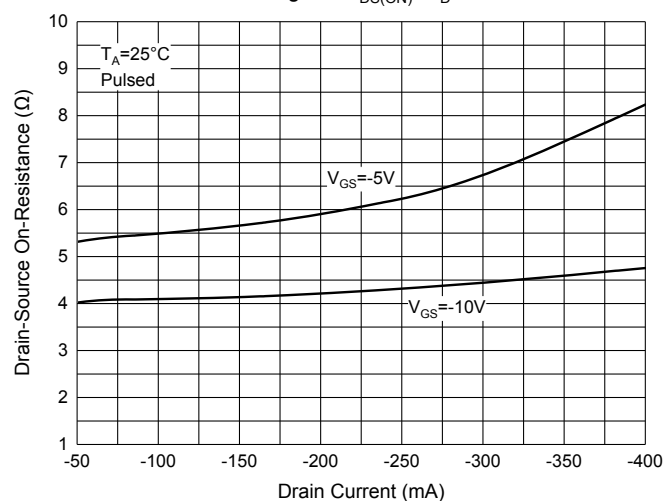


Fig. 4 - $R_{DS(ON)} - V_{GS}$

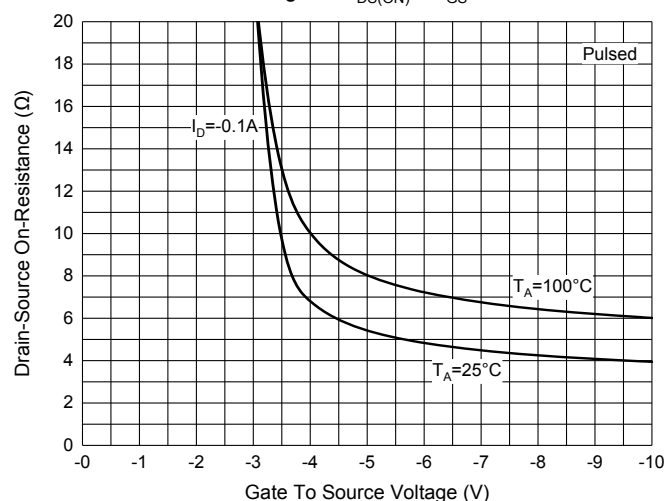


Fig. 5 - $I_S - V_{SD}$

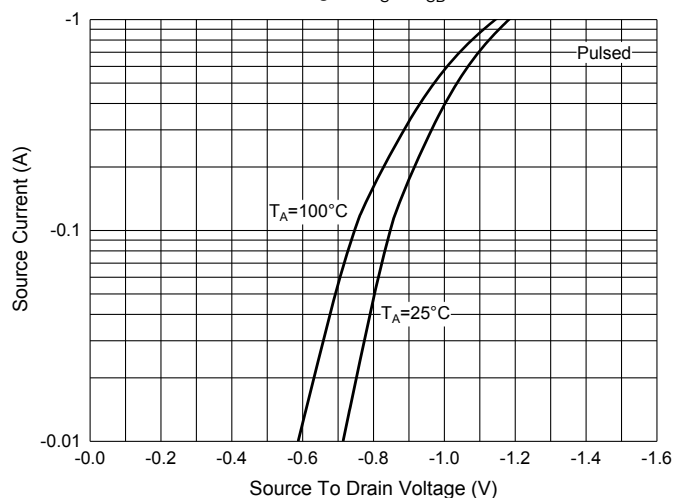
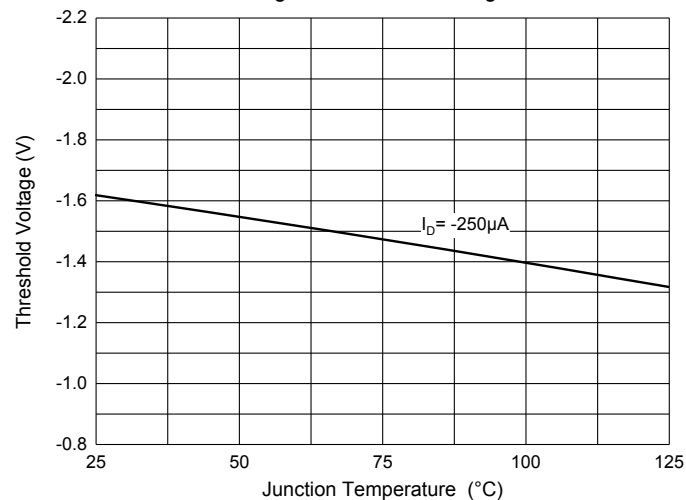


Fig. 6 - Threshold Voltage



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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