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)

P-CHANNEL MOSFET

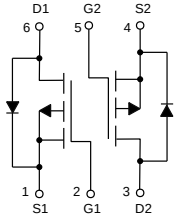
Maximum Ratings

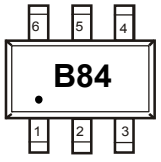
- Operating Junction Temperature Range : -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 278°C/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-50	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	-0.16	A
Pulsed Drain Current	I_{DM}	-0.64	A
Total Power Dissipation	P_D	450	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.

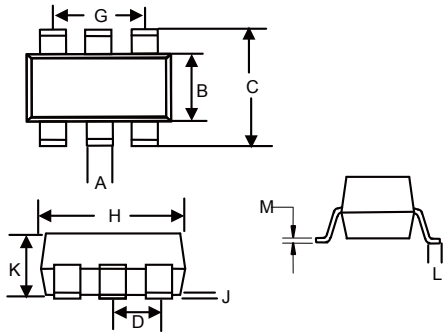
Internal Structure and Marking Code





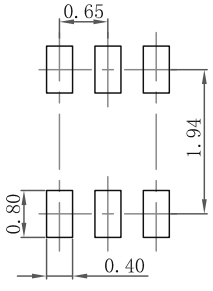
Dot denotes Pin1

SOT-363



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.006	0.014	0.15	0.35	
B	0.045	0.053	1.15	1.35	
C	0.079	0.096	2.00	2.45	
D	0.026		0.65		TYP.
G	0.047	0.055	1.20	1.40	
H	0.071	0.087	1.80	2.20	
J	-----	0.004	-----	0.10	
K	0.031	0.043	0.80	1.10	
L	0.010	0.018	0.26	0.46	
M	0.003	0.006	0.08	0.15	

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	-50			V
Gate-Source Leakage Current	I_{GSS}	V_{DS}=0V, V_{GS} =±20V			±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-50V, V_{GS}=0V			-15	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(Note 2)	$R_{DS(on)}$	V_{GS}=-5V, I_D=-0.1A		2.5	10	Ω
		V_{GS}=-10V, I_D=-0.1A		2.2	8	
Diode Forward Voltage(Note 2)	V_{SD}	V_{GS}=0V, I_S=-0.16A			-2.2	V
Forward Transconductance(Note 2)	g_{FS}	V_{DS}=-25V, I_D=-100mA	50			mS
Dynamic Characteristics(Note 3)						
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(Note 3)						
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=-30V, V_{GS}=-4.5V, I_D=-0.15A, R_{GEN}=2.5q		8.6		ns
Turn-On Rise Time	t_r			20		
Turn-Off Delay Time	$t_{d(off)}$			15		
Turn-Off Fall Time	t_f			77		

Note: 2. Pulse Test : Pulse Width≤80μs, Duty Cycle≤0.5%.

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

Curve Characteristics

Fig. 1 - Output Characteristics

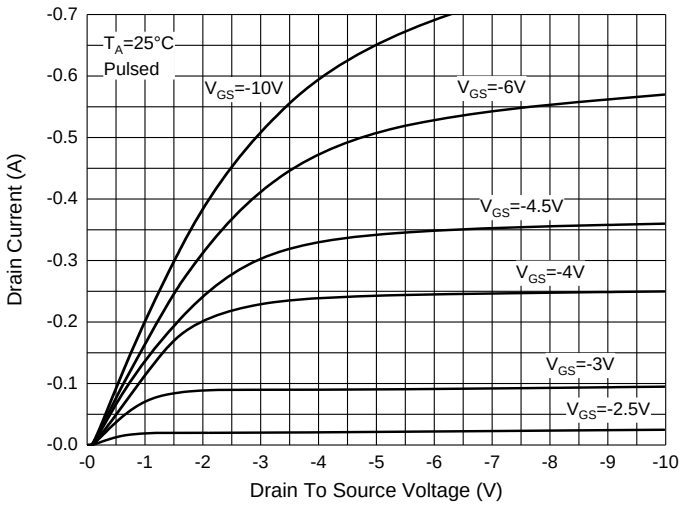


Fig. 2 - Transfer Characteristics

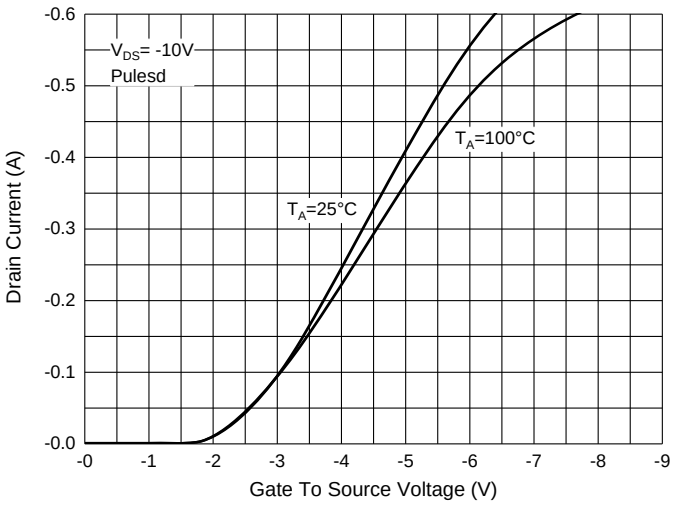


Fig. 3 - $R_{DS(ON)}$—I_D

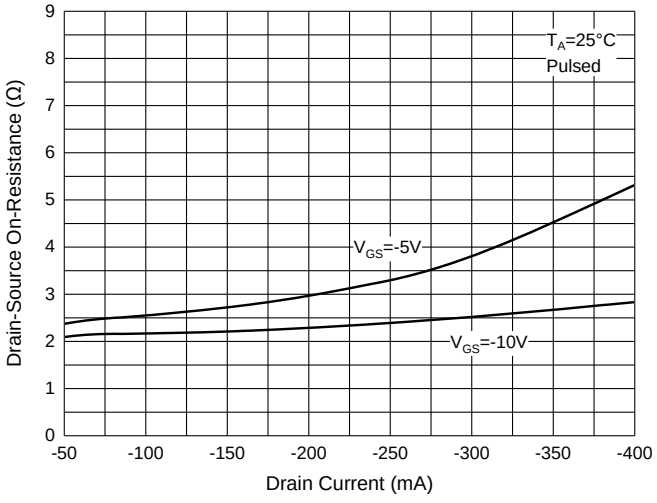


Fig. 4 - $R_{DS(ON)}$—V_{GS}

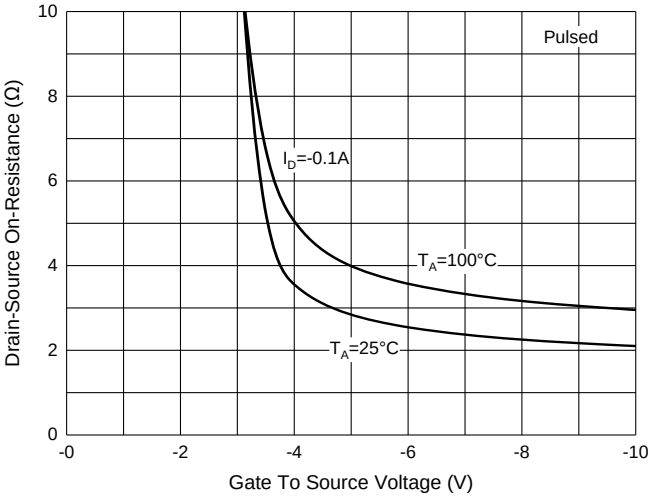


Fig. 5 - I_S—V_{SD}

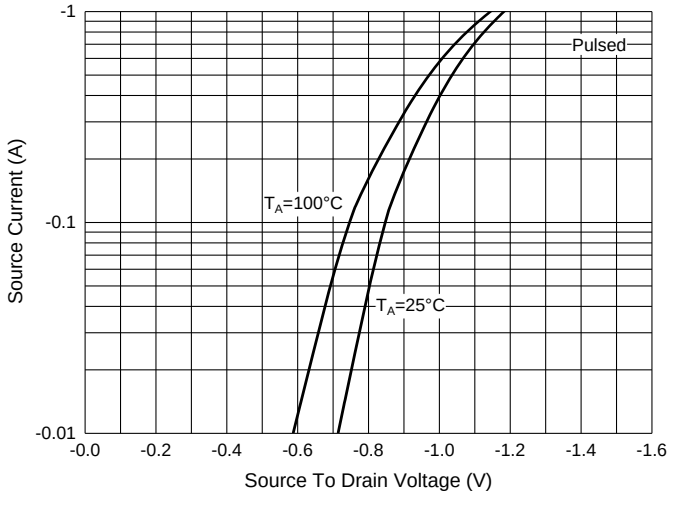
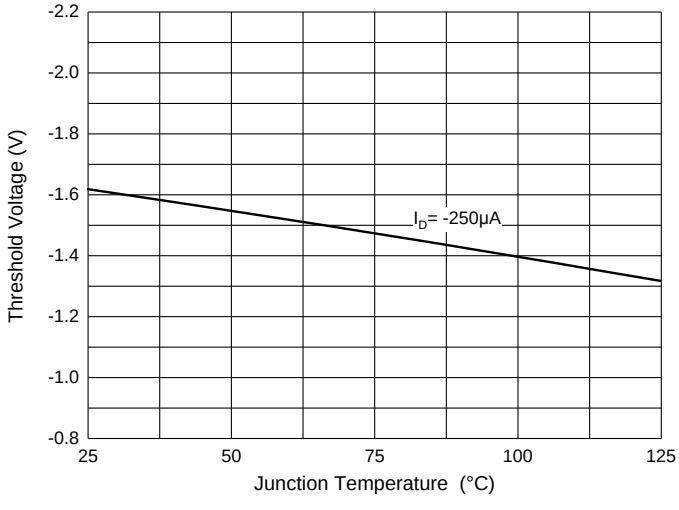


Fig. 6 - Threshold Voltage



Ordering Information

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