

Features

- Energy Efficient
- High-Speed Switching
- 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 (Note 2)

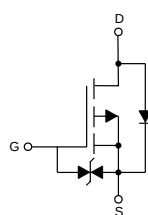
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-50	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	-0.13	A
Pulsed Drain Current (Note 3)	I_{DM}	-0.52	A
Total Power Dissipation	P_D	225	mW

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

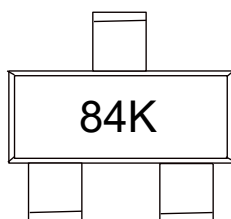
2. Surface Mounted on FR4 Board , $t \leq 10s$.

3. Pulse Width Limited by Junction Temperature.

Internal Structure and Marking Code

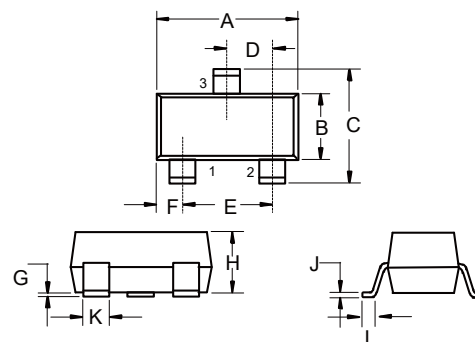


1. GATE
2. SOURCE
3. DRAIN



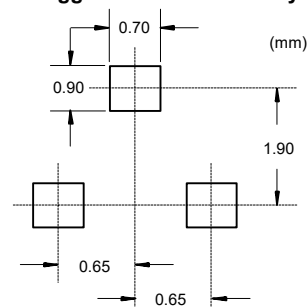
P-CHANNEL MOSFET

SOT-323



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.071	0.087	1.80	2.20	
B	0.045	0.053	1.15	1.35	
C	0.083	0.096	2.10	2.45	
D	0.026		0.65		TYP.
E	0.047	0.055	1.20	1.40	
F	0.012	0.016	0.30	0.40	
G	0.000	0.004	0.00	0.10	
H	0.035	0.044	0.90	1.10	
J	0.002	0.010	0.05	0.25	
K	0.006	0.016	0.15	0.40	
L	0.010	0.018	0.26	0.46	

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			±10	μA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-50V, V _{GS} =0V			-1	μA
Gate-Threshold Voltage ^(Note 4)	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250μA	-0.9	-1.7	-2	V
Drain-Source On-Resistance ^(Note 4)	R _{DS(on)}	V _{GS} =-10V, I _D =-0.1A		2.3	8	Ω
		V _{GS} =-5V, I _D =-0.1A		2.7	10	
Forward Tranconductance ^(Note 4)	g _{FS}	V _{DS} =-25V, I _D =-0.1A	50			mS
Dynamic Characteristics ^(Note 5)						
Input Capacitance	C _{iss}	V _{DS} =-5V, V _{GS} =0V, f=1MHz		22		pF
Output Capacitance	C _{oss}			7.5		
Reverse Transfer Capacitance	C _{rss}			4		
Turn-On Delay Time	t _{d(on)}	V _{DD} =-15V, I _D =-2.5A, R _L =50Ω		1.85		ns
Turn-On Rise Time	t _r			0.7		
Turn-Off Delay Time	t _{d(off)}			12		
Turn-Off Fall Time	t _f			6		
Drain-Source Body Diode Characteristics						
Continuous Body Diode Current	I _S				-0.13	A
Pulsed Diode Forward Current	I _{SM}				-0.52	
Body Diode Voltage	V _{SD}	I _{SD} =-0.13A, V _{GS} =0V			-1.2	V

Note 4. Pulse Test : Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.

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

Curve Characteristics

Fig. 1 - Typical Output Characteristics

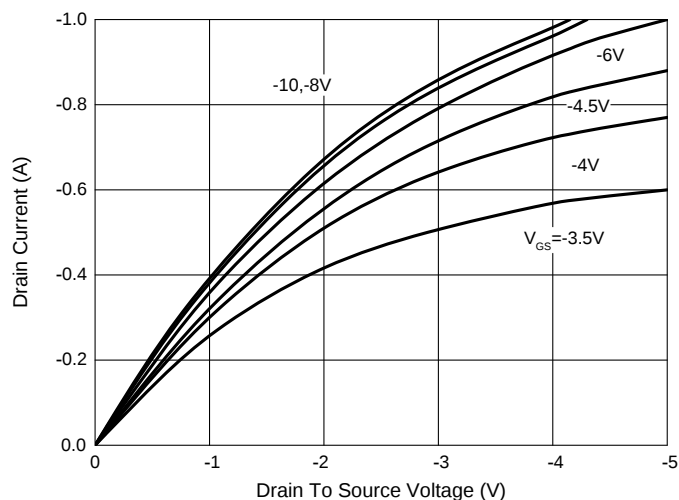


Fig. 2 - Transfer Characteristics

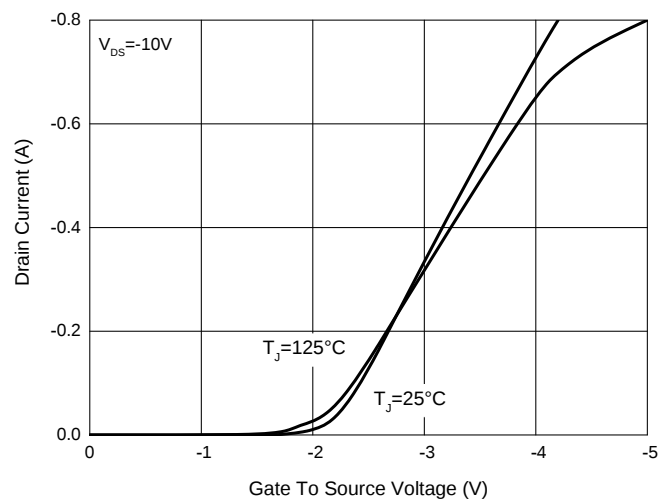


Fig. 3 - $R_{DS(ON)} - I_D$

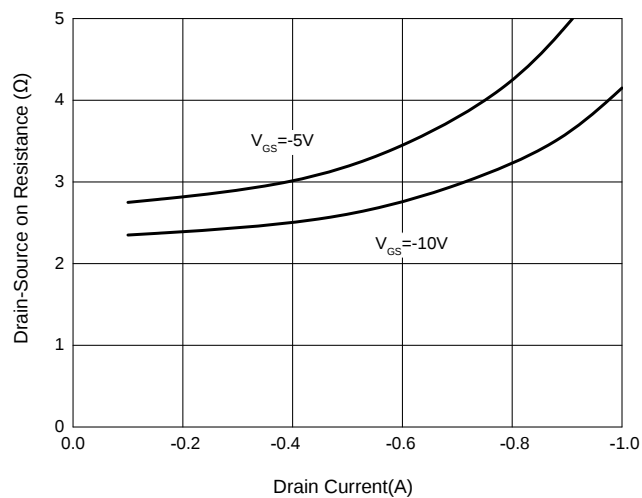


Fig. 4 - $R_{DS(ON)} - V_{GS}$

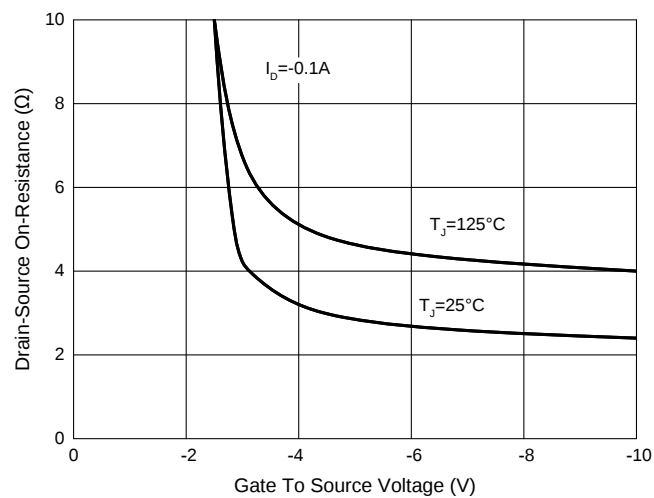


Fig. 5 - $I_S - V_{SD}$

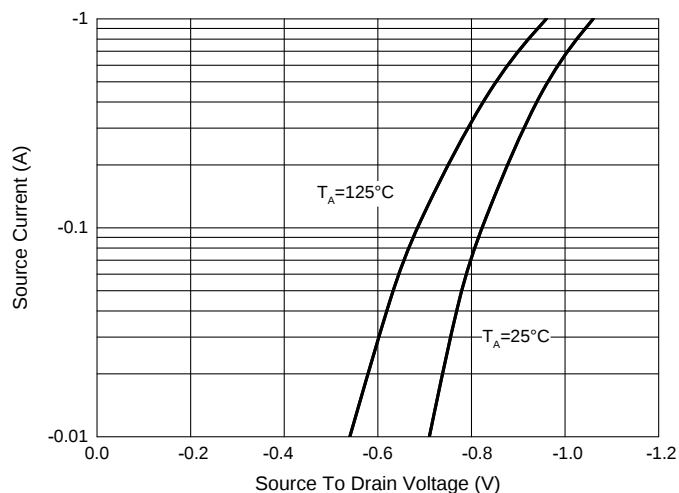
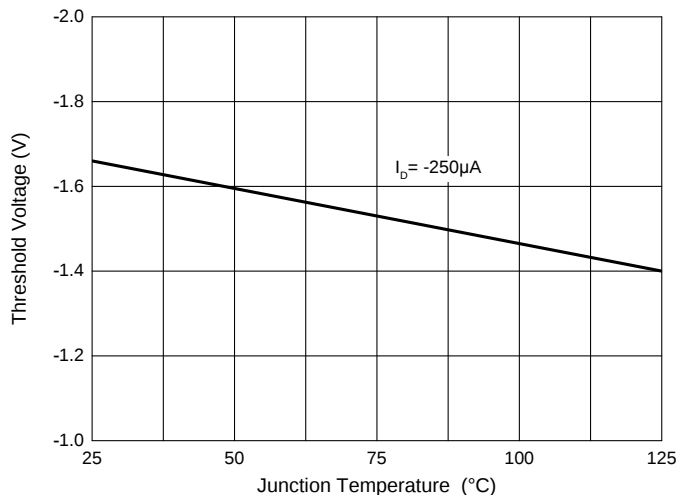


Fig. 6 - Threshold Voltage



Ordering Information

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

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