

P-Channel Enhancement Mode MOSFET

● DESCRIPTION

The VIC1127 is the P-channel logic enhancement mode power field effect transistor is produced using high cell density. advanced trench technology to provide excellent Rds(on).

This device is suitable for use as a load switch or in PWM applications.

These devices are particularly suited for low voltage application, and low in-line power loss are needed in a very small outline surface mount package.

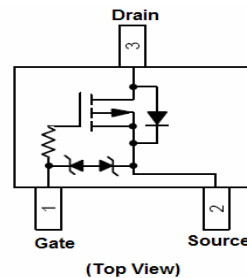
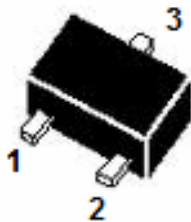
● FEATURES

- ◆ $V_{DS} = -20V$; $V_{GS} = \pm 8V$; $I_D = -4A$
- ◆ $R_{DS(ON)} = 46m\Omega$ (TYP.) @ $V_{GS} = -4.5V$
- ◆ $R_{DS(ON)} = 54m\Omega$ (TYP.) @ $V_{GS} = -2.5V$
- ◆ $R_{DS(ON)} = 66m\Omega$ (TYP.) @ $V_{GS} = -1.8V$

● APPLICATIONS

- ◆ Power Management in Notebook
- ◆ Potable Equipment
- ◆ Battery Powered System
- ◆ DC/DC Converter
- ◆ Load Switch、DSC LCD Display inverter

● PIN CONFIGURATION



● ABSOLUTE MAXIMUM RATINGS (TA=25°C Unless otherwise noted)

Symbol	Parameter	Rating		Unit
V _{DS}	Drain-Source Voltage	-20		V
V _{GS}	Gate-Source Voltage	±8		
I _D	Continuous Drain Current	V _{GS} = -4.5V	-4	A
I _{DP}	Drain Current(Pulse)	-15		A
T _J	Maximum Junction Temperature	-55 to 150		°C
T _{STG}	Storage Temperature Range	-55 to 150		
P _D	Maximum Power Dissipation (Ta=25°C)	1.4		W
ESD	Gate-Source ESD Rating(HBM, Method 3015)	3000		V



● ELECTRICAL CHARACTERISTICS (TA=25°C Unless otherwise noted)

Symbol	Parameter	Test Conditions	VIC1127DJ			Unit
			Min.	Typ.	Max.	
Static Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =-250μA	-20	--	--	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =-16V, V _{GS} =0V	--	--	-1	μA
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =-250μA	-0.3	-0.55	-1	V
I _{GSS}	Gate-Body Leakage Current	V _{GS} =±8V, V _{DS} =0V	--	--	±100	nA
R _{DS(ON)} a	Static Drain-Source On-Resistance	V _{GS} =-4.5V, I _D =-4.0A	--	46	55	mΩ
		V _{GS} =-2.5V, I _D =-4.0A	--	54	63	
		V _{GS} =-1.8V, I _D =-2.0A	--	66	73	
Dynamic b						
Q _g	Total Gate Charge	V _{GS} =-4.5V, V _{DS} =-10V, I _D =-4A	--	17.2	--	nC
Q _{gs}	Gate-Source Charge		--	1.3	--	
Q _{gd}	Gate-Drain Charge		--	4.5	--	
SWITCHING CHARACTERISTICS						
t _{d(ON)}	Turn-on Delay Time	V _{DD} =-10V, R _L =2.5Ω, I _{DS} =-1A, V _{GEN} =-4.5V, R _G =6Ω	--	9.5	--	ns
t _{d(OFF)}	Turn-off Delay Time		--	94	--	
DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS						
V _{sD} a	Diode Forward Voltage	I _S = -1.0A, V _{GS} = 0V	--	-0.78	-1	V

Notes:

- a. Pulse width limited by maximum junction temperature.
- b. Pulse test: PW ≤ 300μs, duty cycle ≤ 2%.
- c. For design AID only, not subject to production testing.
- d. Switching time is essentially independent of operating temperature.

The products and product specifications contained herein are subject to change without notice to improve performance characteristics. consult us, or our representatives before use, to confirm that the information in this datasheet is up to date.

we assume no responsibility for any infringement of patents, patent rights, or other rights arising from the use of any information and circuitry in this datasheet.

● **TYPICAL CHARACTERISTICS (TA=25°C Unless otherwise noted)**

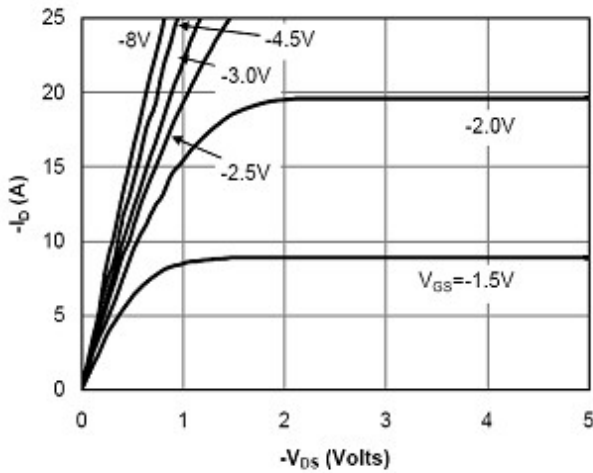


Fig 1: On-Region Characteristics

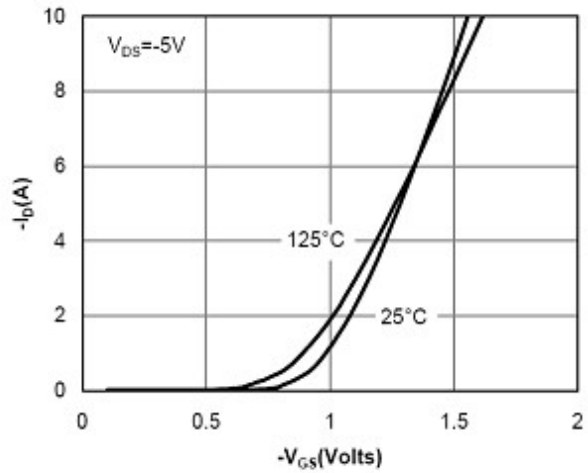


Figure 2: Transfer Characteristics

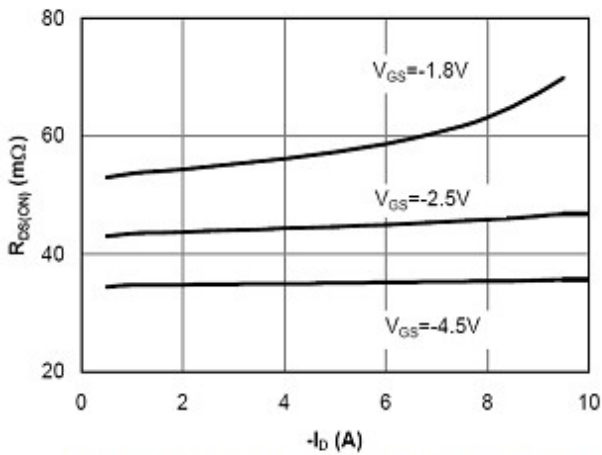


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

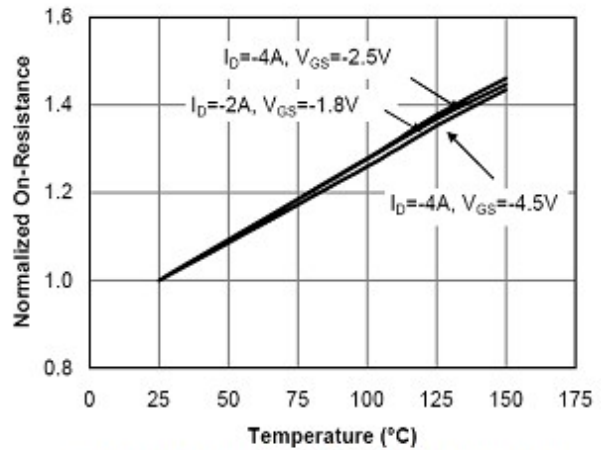


Figure 4: On-Resistance vs. Junction Temperature

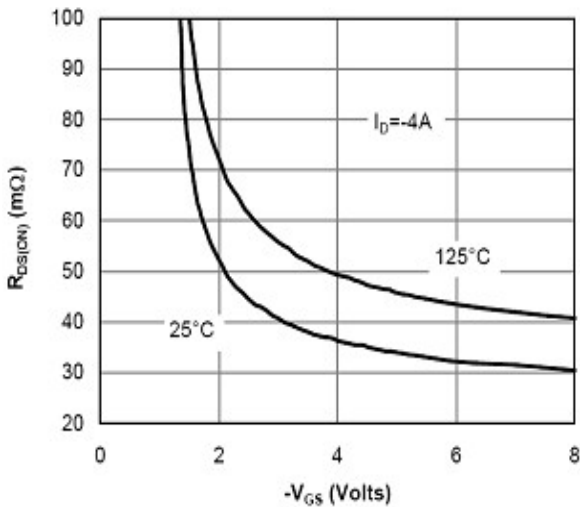


Figure 5: On-Resistance vs. Gate-Source Voltage

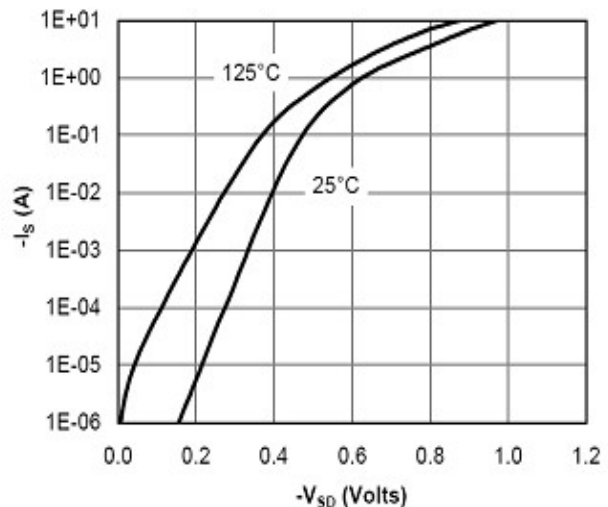
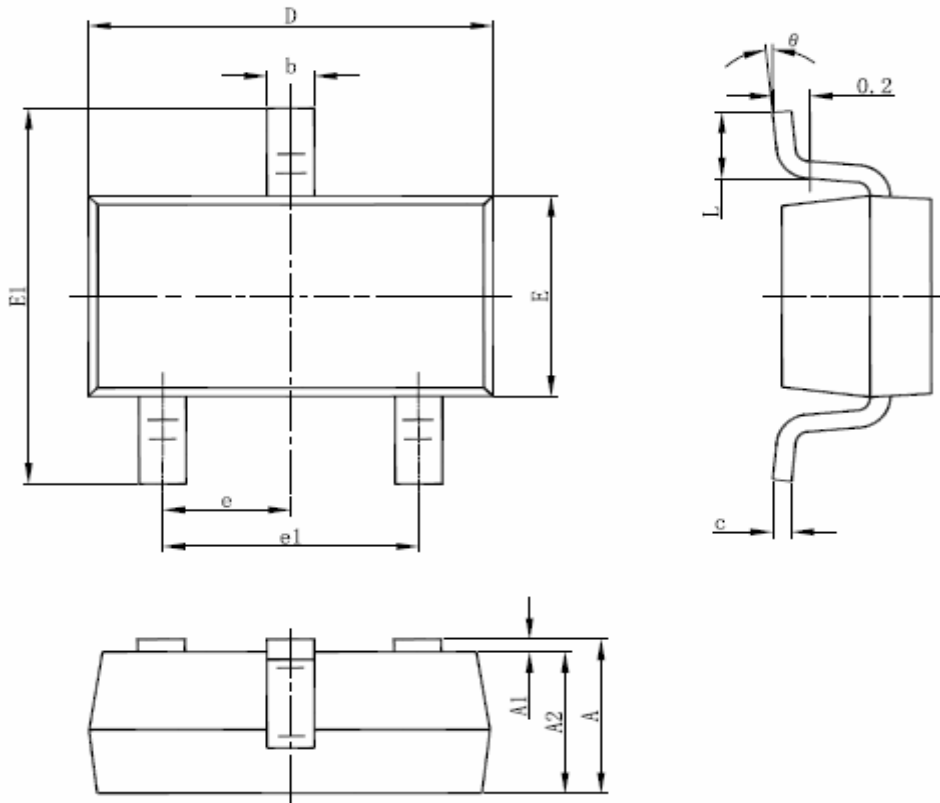


Figure 6: Body-Diode Characteristics

● ORDERING INFORMATION

Part Number	Package code	Shipping
VIC1127DJ	DJ: SOT23-3L	3000/Tape & Reel

● PACKAGE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
theta	0°	8°	0°	8°

单击下面可查看定价，库存，交付和生命周期等信息

[>>VIC\(微科\)](#)