P-Channel Enhancement Mode MOSFET

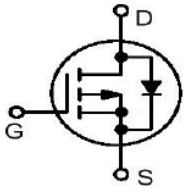
Features

- $R_{DS(ON)} \leq 52m\Omega$@ $V_{GS} = -10V$
- $R_{DS(ON)} \leq 87m\Omega$@ $V_{GS} = -4.5V$
- High-speed Switching
- Drive Circuits Can be Simple
- Parallel Use is Easy

HF

Typical Applications

- Power Management in Note Book
- Switching Application
- Battery Powered System
- Load Switch



Mechanical Data

- Case: SOT-23
- Molding Compound, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Plated Leads, Solderable Per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
AO3407	SOT-23	3000 pcs / Tape & Reel	A79T

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter		Symbol	Value	Unit
Drain-Source Voltage		V_{DSS}	-30	V
Gate -Source Voltage		V_{GSS}	±20	V
Continuous Drain Current	T_A = 25°C	I_D	-4.3	A
	T_A = 70°C		-3.5	A
Power Dissipation	T_A = 25°C	P_D	0.35	W

Thermal Characteristics

Parameter		Symbol	Value	Unit
Thermal Resistance Junction to Ambient Air	SOT-23	$R_{\theta JA}$	357	°C/W
Thermal Resistance Junction to Lead	SOT-23	$R_{\theta JL}$	214	°C/W
Thermal Resistance Junction to Case	SOT-23	$R_{\theta JC}$	180	°C/W
Operating Junction Temperature Range		T_J	-55 to +150	°C
Storage Temperature Range		T_{STG}	-55 to +150	°C

Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
OFF Characteristics						
V_{DSS}	Drain-Source Breakdown Voltage	V_{GS} = 0V, I_D = -250μA	-30	-	-	V
I_{DSS}	Drain to Source Leakage Current	V_{DS} = -24V, V_{GS} = 0V	-	-	-1	uA
I_{GSS}	Gate-body Leakage	V_{GS} = ±20V, V_{DS} = 0V	-	-	±100	nA
ON Characteristics *2						
$R_{DS(ON)}$	Static Drain-Source On-resistance	V_{GS} = -10V, I_D = -4.1A	-	40	52	mΩ
		V_{GS} = -4.5V, I_D = -3A	-	59	87	
$V_{GS(TH)}$	Gate Threshold Voltage	V_{DS} = V_{GS}, I_D = -250uA	-1	-1.5	-2.1	V
Dynamic Characteristics *3						
Ciss	Input Capacitance	V_{GS} = 0V V_{DS} = -15V f = 1.0MHz	-	565	-	pF
Coss	Output Capacitance		-	89	-	
Crss	Reverse Transfer Capacitance		-	77	-	
Source-Drain Diode Characteristics						
V_{SD}	Diode Forward Voltage *1	I_S = -1A, V_{GS} = 0V	-	0.8	-1	V

Notes:

1、 Surface Mounted on FR4 Board, t ≤ 10 sec

2、 Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.

3、 Guaranteed by design, not subject to production.

Ratings and Characteristic Curves (@ T_A = 25°C unless otherwise specified)

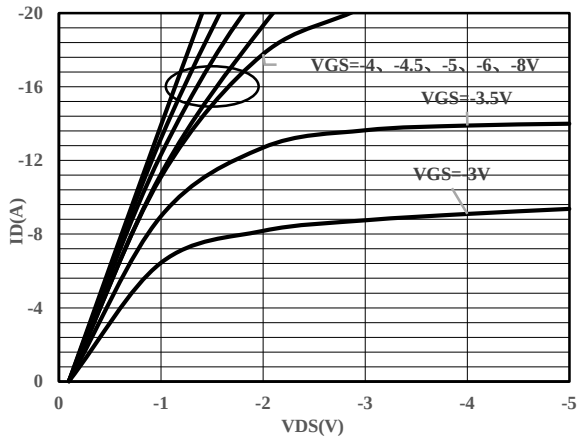


Fig.1- On-Region Characteristics

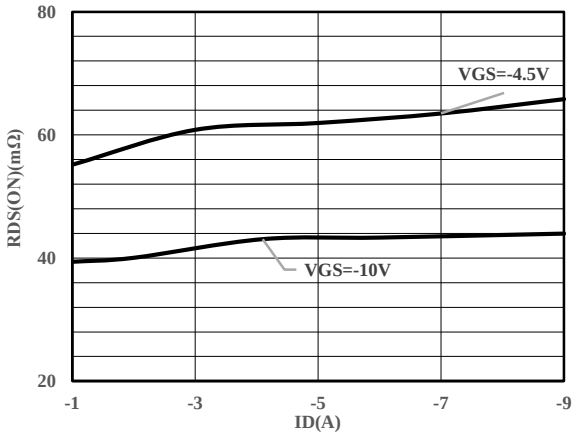


Fig.2-On-Resistance vs. Drain Current and Gate Voltage

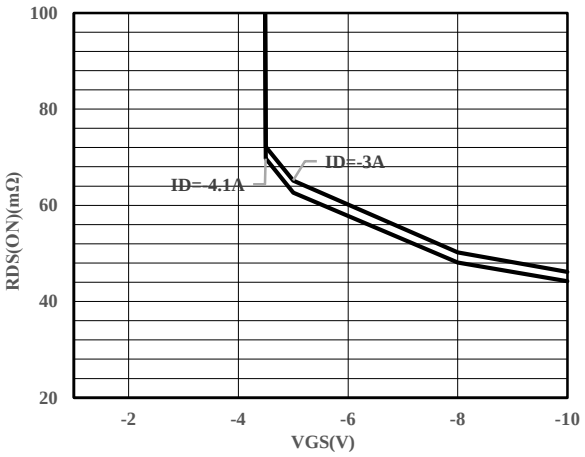


Fig.3-On-Resistance vs. Gate-Source Voltage

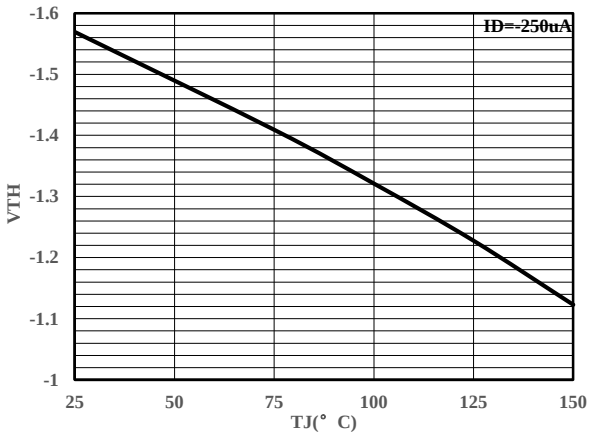


Fig.4- Gate Voltage vs. Junction Temperature

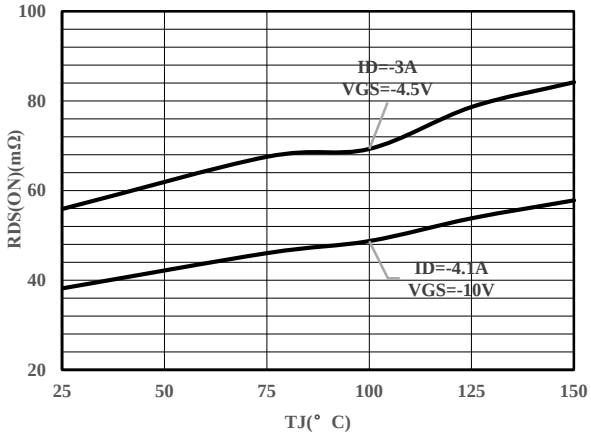


Fig.5-On-Resistance vs. Junction Temperature

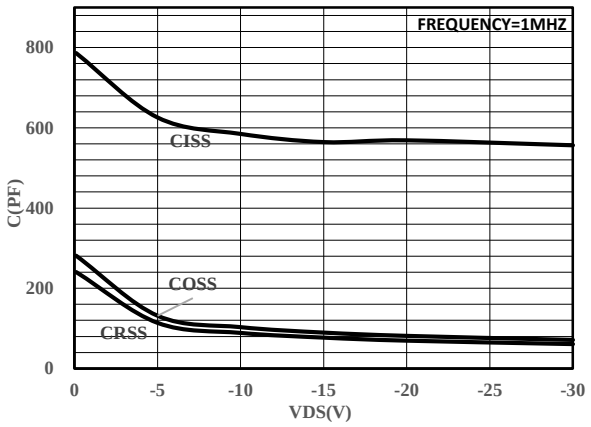
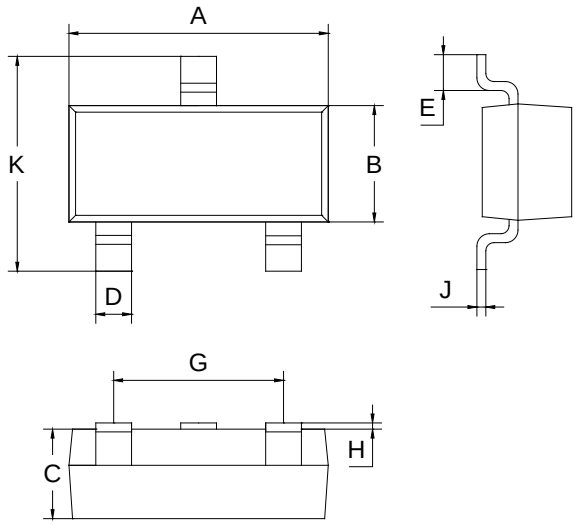


Fig.7-Capacitance Characteristics

Package Outline Dimensions (unit: mm)

SOT-23



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60

Mounting Pad Layout (unit: mm)

SOT-23