

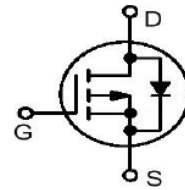
Features

- $R_{DS(ON)} \leq 52m\Omega @ V_{GS} = -10V$
- $R_{DS(ON)} \leq 87m\Omega @ V_{GS} = -4.5V$
- 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 (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

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

Thermal Characteristics

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

Electrical Characteristics (@ $T_A = 25^{\circ}\text{C}$ unless otherwise specified)

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

Notes:

- 1、 Surface Mounted on FR4 Board, $t \leq 10$ sec
- 2、 Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$.
- 3、 Guaranteed by design, not subject to production.

Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

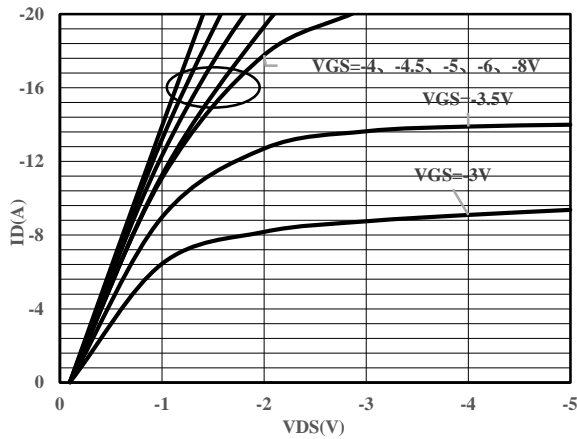


Fig.1- On-Region Characteristics

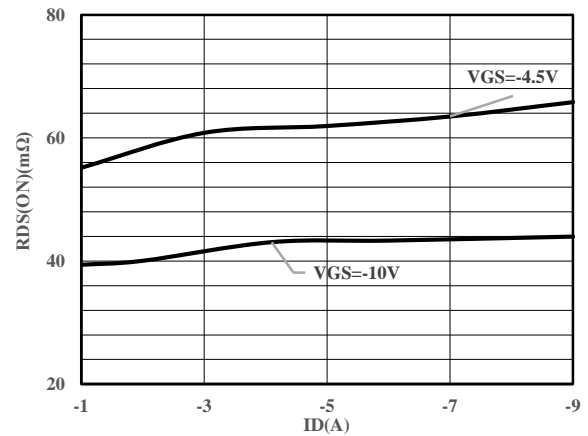


Fig.2-On-Resistance vs. Drain Current and Gate Voltage

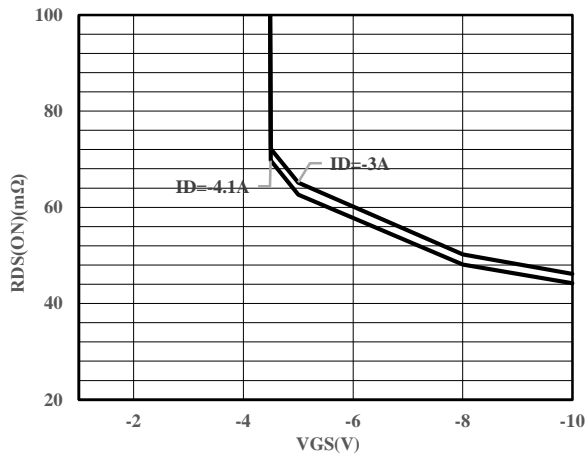


Fig.3-On-Resistance vs. Gate-Source Voltage

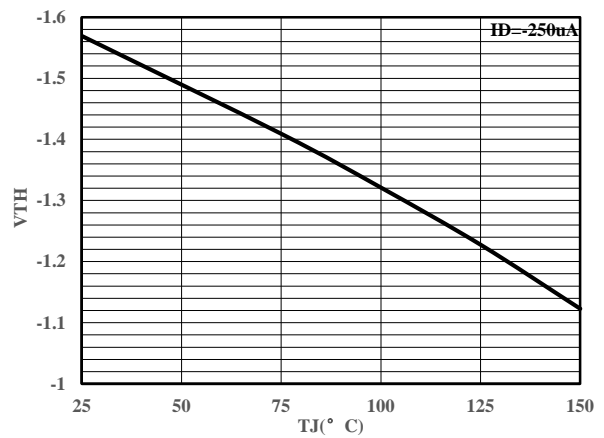


Fig.4- Gate Voltage vs. Junction Temperature

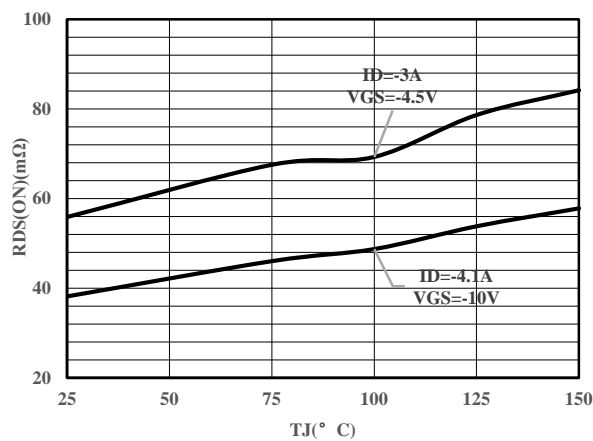


Fig.5-On-Resistance vs. Junction Temperature

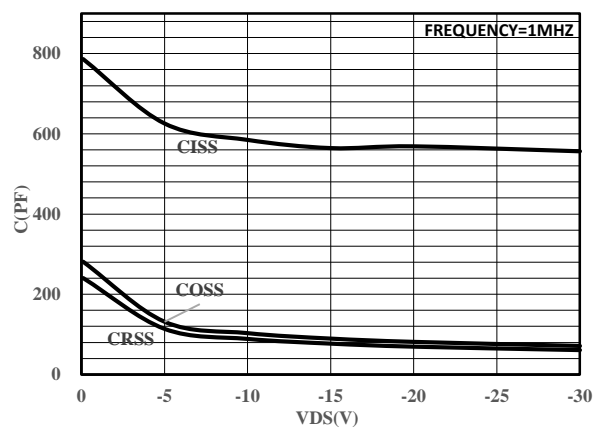
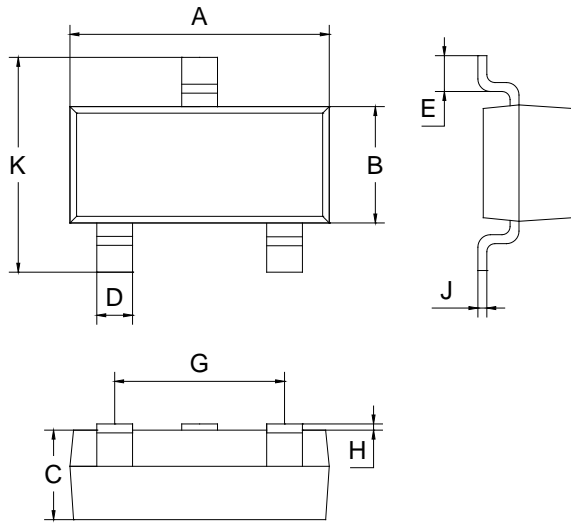


Fig.7-Capacitance Characteristics

Package Outline Dimensions (unit: mm)

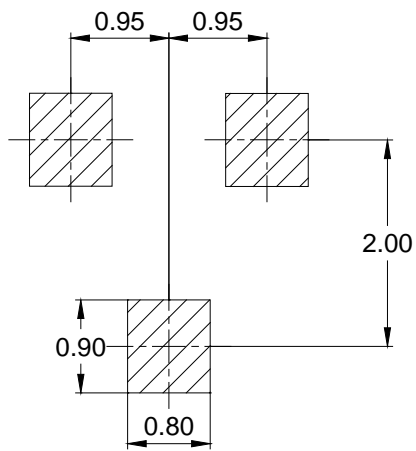
SOT-23



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



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