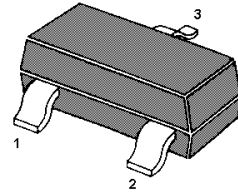


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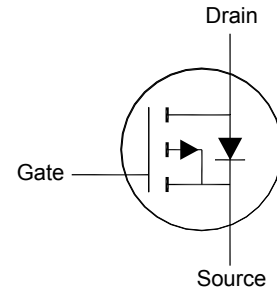
P-Channel Enhancement Mode MOSFET

Features

- Halogen and Antimony Free(HAF), RoHS compliant



1. Gate 2. Source 3. Drain
SOT-23 Plastic Package



Absolute Maximum Ratings at $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$-V_{DS}$	20	V
Gate-Source Voltage	V_{GS}	± 8	V
Drain Current	$-I_D$	2.8	A
Peak Drain Current ¹⁾	$-I_{DM}$	8	A
Power Dissipation	P_{tot}	$T_A = 25^\circ\text{C}$ $T_A = 75^\circ\text{C}$	W
		0.9 0.57	
Thermal Resistance from Junction to Ambient (PCB mounted) ²⁾	$R_{\theta JA}$	140	$^\circ\text{C/W}$
Junction and Storage Temperature Range	T_J, T_{stg}	- 55 to + 150	$^\circ\text{C}$

¹⁾ Repetitive Rating: Pulse width limited by the Maximum junction temperature.

²⁾ 1 in² 2oz Cu PCB board.

TOP DYNAMIC



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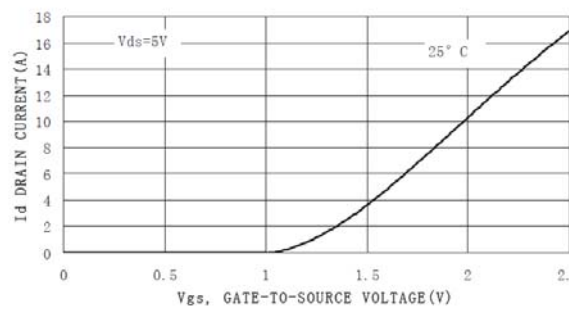
Characteristics at $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage at $-I_D = 250\ \mu\text{A}$	$-BV_{\text{DSS}}$	20	-	-	V
Gate-Source Threshold Voltage at $V_{\text{DS}} = V_{\text{GS}}$, $-I_D = 250\ \mu\text{A}$	$-V_{\text{GSth}}$	0.4	-	0.9	V
Drain-Source Leakage Current at $-V_{\text{DS}} = 9.6\ \text{V}$	$-I_{\text{DSS}}$	-	-	1	μA
Gate Leakage Current at $V_{\text{GS}} = \pm 8\ \text{V}$	I_{GSS}	-	-	± 100	nA
Diode Forward Current	$-I_S$	-	-	2.4	A
Drain-Source On-State Resistance at $-V_{\text{GS}} = 4.5\ \text{V}$, $-I_D = 2.8\ \text{A}$ at $-V_{\text{GS}} = 2.5\ \text{V}$, $-I_D = 2\ \text{A}$	$R_{\text{DS(on)}}$	- -	- -	100 150	m Ω
Forward Transconductance at $-V_{\text{DS}} = 5\ \text{V}$, $-I_D = 4\ \text{A}$	g_{FS}	-	6.5	-	S
Diode Forward Voltage at $-I_S = 0.75\ \text{A}$, $V_{\text{GS}} = 0\ \text{V}$	$-V_{\text{SD}}$	-	-	1.2	V
Input Capacitance at $V_{\text{GS}} = 0\ \text{V}$, $-V_{\text{DS}} = 6\ \text{V}$, $f = 1\ \text{MHz}$	C_{iss}	-	882.51	-	pF
Output Capacitance at $V_{\text{GS}} = 0\ \text{V}$, $-V_{\text{DS}} = 6\ \text{V}$, $f = 1\ \text{MHz}$	C_{oss}	-	145.54	-	pF
Reverse Transfer Capacitance at $V_{\text{GS}} = 0\ \text{V}$, $-V_{\text{DS}} = 6\ \text{V}$, $f = 1\ \text{MHz}$	C_{rss}	-	97.26	-	pF
Turn-On Delay Time at $-V_{\text{DD}} = 6\ \text{V}$, $-V_{\text{GEN}} = 4.5\ \text{V}$, $-I_D = 1\ \text{A}$, $R_G = 6\ \Omega$, $R_L = 6\ \Omega$	$t_{\text{d(on)}}$	-	17.28	-	ns
Turn-On Rise Time at $-V_{\text{DD}} = 6\ \text{V}$, $-V_{\text{GEN}} = 4.5\ \text{V}$, $-I_D = 1\ \text{A}$, $R_G = 6\ \Omega$, $R_L = 6\ \Omega$	t_r	-	3.73	-	ns
Turn-Off Delay Time at $-V_{\text{DD}} = 6\ \text{V}$, $-V_{\text{GEN}} = 4.5\ \text{V}$, $-I_D = 1\ \text{A}$, $R_G = 6\ \Omega$, $R_L = 6\ \Omega$	$t_{\text{d(off)}}$	-	36.05	-	ns
Turn-Off Fall Time at $-V_{\text{DD}} = 6\ \text{V}$, $-V_{\text{GEN}} = 4.5\ \text{V}$, $-I_D = 1\ \text{A}$, $R_G = 6\ \Omega$, $R_L = 6\ \Omega$	t_f	-	6.19	-	ns

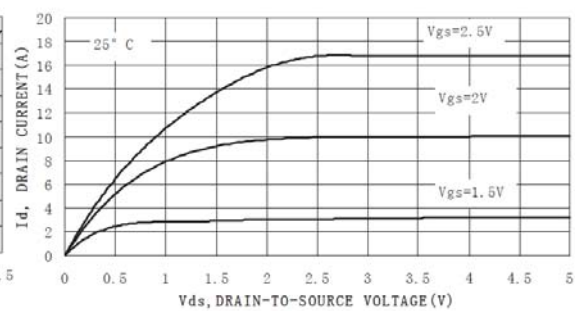
TOP DYNAMIC



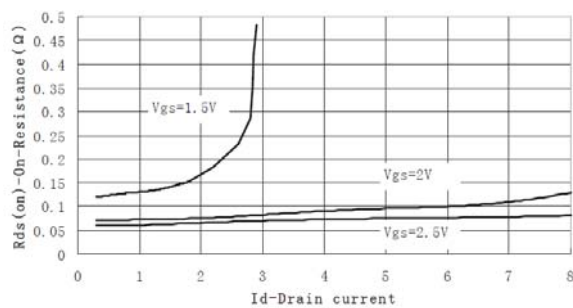
Dated: 21/01/2016 Rev:02



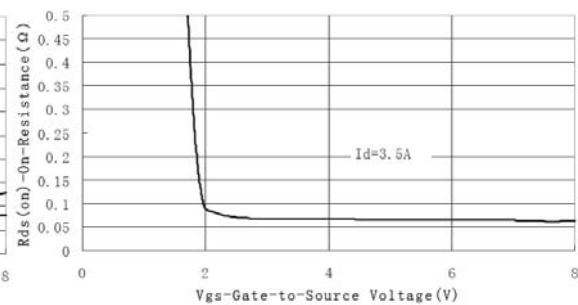
Transfer Characteristics



On-Region Characteristics



On-Resistance versus Drain Current



On-Resistance vs. Gate-to-Source Voltage