



Micro Commercial Components



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MCX3152P

Dual P-Channel MOSFET

Features

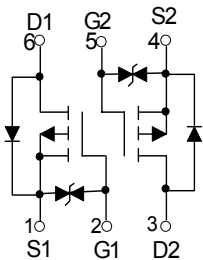
- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- P-Channel Swith with Low $R_{DS(ON)}$
- ESD Protected Gate
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Marking:3152

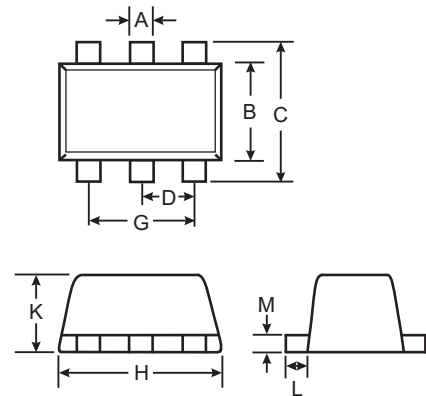
Maximum Ratings @ 25°C Unless Otherwise Specified

Symbol	Rating	Rating	Unit
N-MOSFET			
V_{DS}	Drain-Source Voltage	-20	V
V_{GS}	Gate-Source Voltage	±12	V
I_D	Continuous Drain Current (note1)	-0.66	A
I_{DM}	Pulsed Drain Current (tp=10us)	-1.0	A
P_D	Power Dissipation (note2)	150	mW
R_{thJA}	Thermal Resistance from Junction to Ambient(note1)	833	°C/W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55~150	°C
T_L	Lead Temperature for Soldering Purposes (1/8" from case for 10s)	260	°C

Equivalent Circuit



SOT-563



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.006	.011	0.15	0.30	
B	.043	.049	1.10	1.25	
C	.061	.067	1.55	1.70	
D	.020		0.50		
G	.035	.043	0.90	1.10	
H	.059	.067	1.50	1.70	
K	.022	.023	0.56	0.60	
L	.004	.011	0.10	0.30	
M	.004	.007	0.10	0.18	

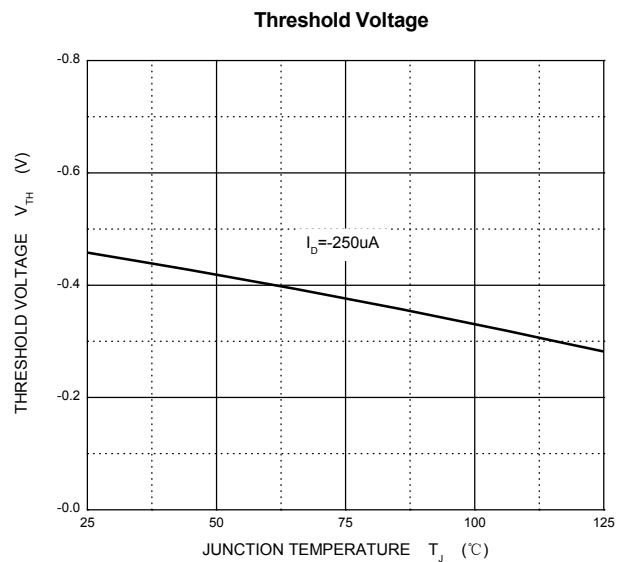
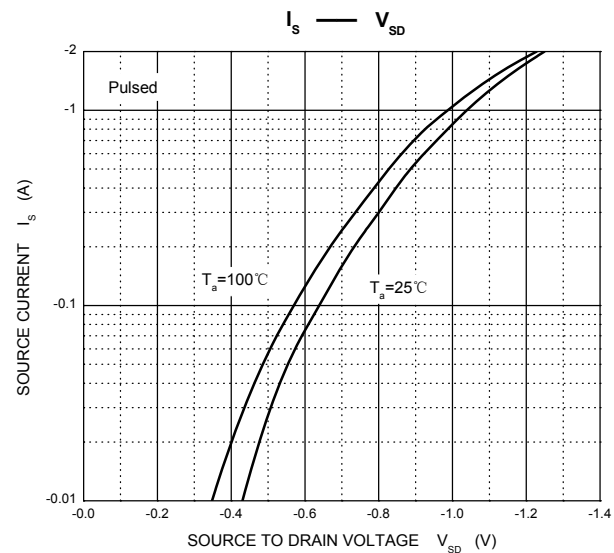
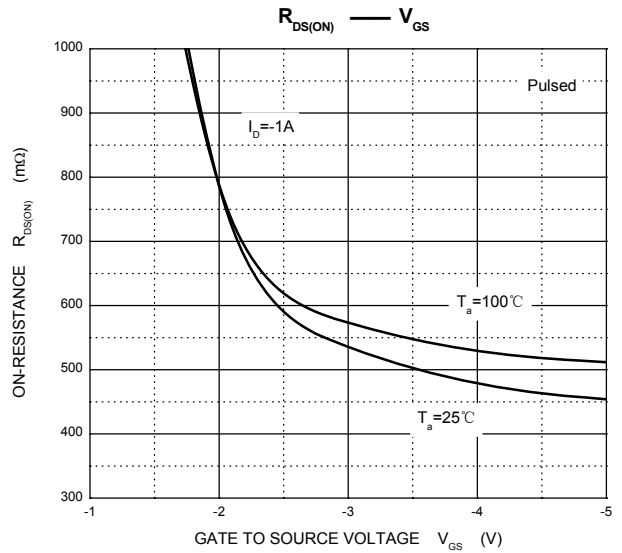
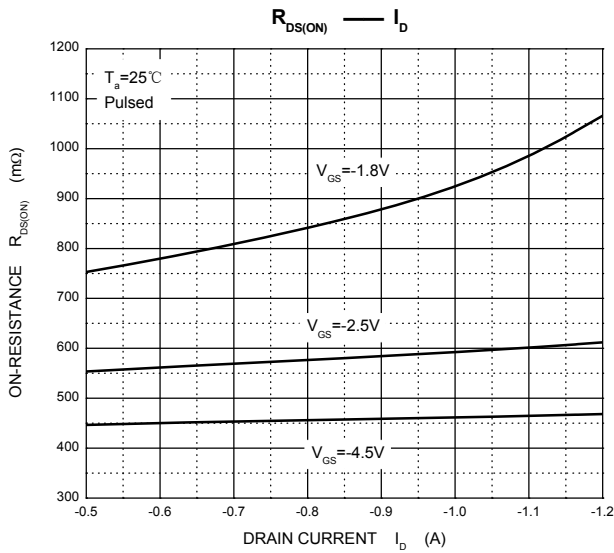
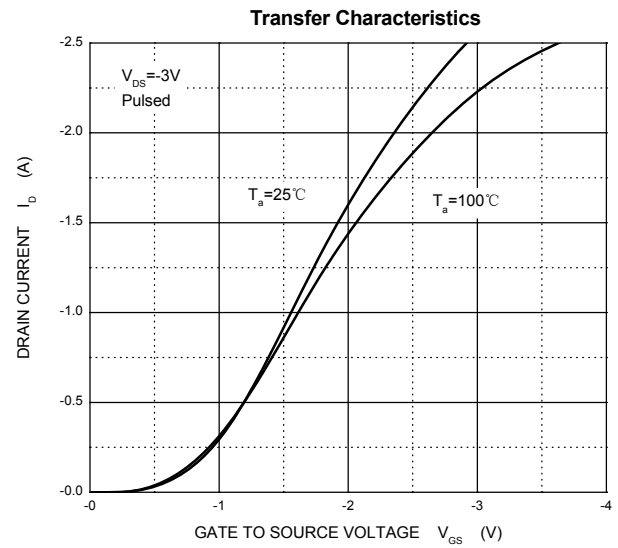
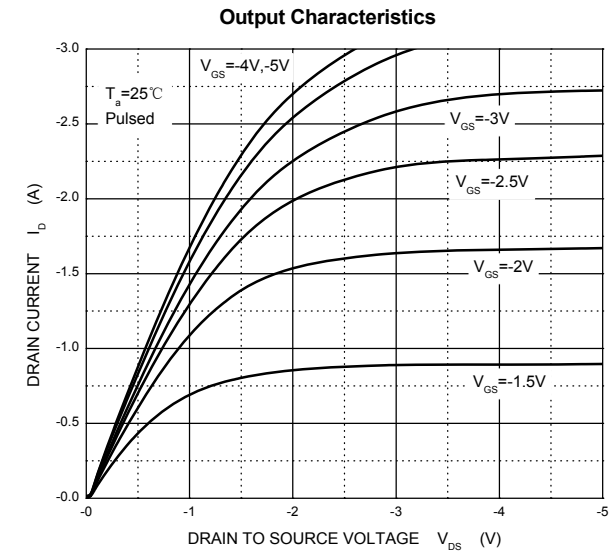
MOSFET ELECTRICAL CHARACTERISTICS(T_a=25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC PARAMETERS						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = -250μA	-20			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = -16V, V _{GS} = 0V			-1	μA
Gate-body leakage current	I _{GSS}	V _{GS} = ±4.5V, V _{DS} = 0V			±2	μA
Gate threshold voltage (note 2)	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250μA	-0.4	-0.45	-1	V
Drain-source on-resistance(note 2)	R _{DS(on)}	V _{GS} = -4.5V, I _D = -0.66A		0.45	0.7	Ω
		V _{GS} = -2.5V, I _D = -0.5A		0.55	1	Ω
		V _{GS} = -1.8V, I _D = -0.4A		0.72	1.2	Ω
Forward transconductance(note 2)	g _{FS}	V _{DS} = -10V, I _D = -0.43A		1		S
Diode forward voltage	V _{SD}	I _S = -0.35A, V _{GS} = 0V			-1.2	V
DYNAMIC PARAMETERS(note 4)						
Input Capacitance	C _{iss}	V _{DS} = -16V, V _{GS} = 0V, f = 1MHz		105	175	pF
Output Capacitance	C _{oss}			15	30	pF
Reverse Transfer Capacitance	C _{rss}			10	20	pF
SWITCHING PARAMETERS (note 4)						
Turn-on delay time (note 3)	t _{d(on)}	V _{DD} = -4.5V, V _{GS} = -10V, I _D = -215mA, R _{GEN} = 10Ω		10		ns
Turn-on rise time (note 3)	t _r			12		ns
Turn-off delay time (note 3)	t _{d(off)}			35		ns
Turn-off fall time (note 3)	t _f			19		ns
Total Gate Charge(note 3)	Q _g	V _{DS} = -10V, V _{GS} = -4.5V, I _D = -215mA		1.7	2.5	nC
Gate Source Charge(note 3)	Q _{gs}			0.3		nC
Gate Drain Charge(note 3)	Q _{gd}			0.4		nC

Notes :

1. Surface mounted on FR4 board using the minimum recommended pad size.
2. Pulse Test : Pulse width = 300μs, duty cycle ≤ 2%.
3. Switching characteristics are independent of operating junction temperatures.
4. Granted by design, not subject to producing.

Typical Characteristics





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Ordering Information :

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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