

Dual N-CHANNEL MOSFET

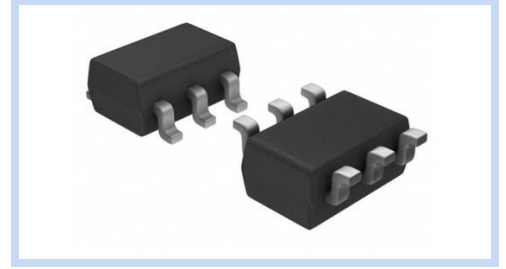
60V 0.64A 0.30W SOT-363 ESD

MFT62NA64S363E

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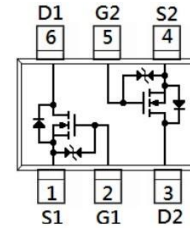
FEATURE

- $R_{DS(ON)} < 3000m\Omega$, $V_{GS}=10V$, $I_D=0.5A$
- $R_{DS(ON)} < 4000m\Omega$, $V_{GS}=4V$, $I_D=0.3A$
- ESD Diode (1KV) Protected
- Application: Low Voltage Power management, Low In-Line Power Loss Application



MECHANICAL DATA

- Case: SOT-363 Package
- Terminals: Solderable per MIL-STD-750, Method 2026

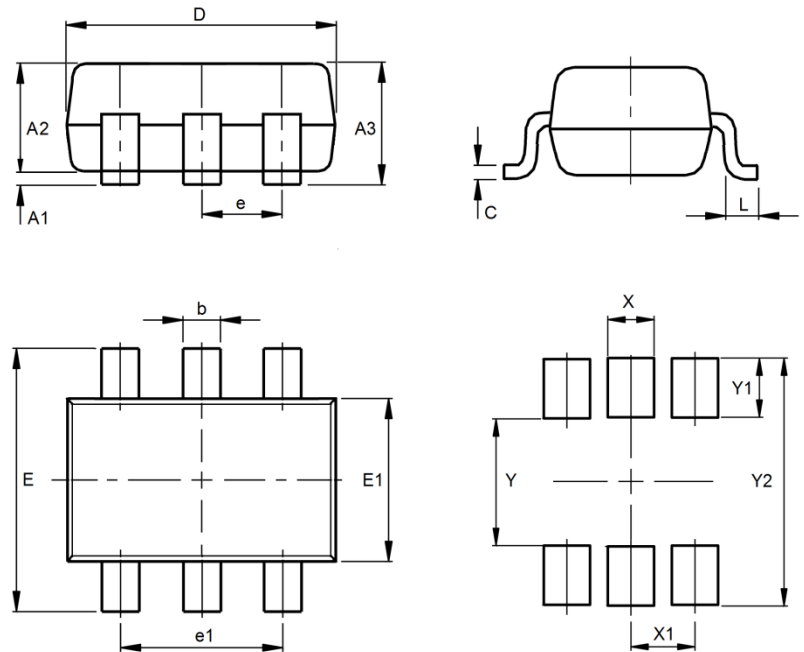


MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DSS}	60	V
Gate-Source Voltage	V_{GSS}	± 20	V
Drain Current – Continuous	I_D	($T_A=25^\circ C$)	0.64
		($T_A=70^\circ C$)	0.35
Drain Current – Pulsed	I_{DM}	0.80	A
Continuous Source Current (Diode Conduction)	I_S	0.64	A
Power Dissipation	P_D	($T_A=25^\circ C$)	0.30
		($T_A=70^\circ C$)	0.20
Operating Junction Temperature	T_J	-55 ~ 150	$^\circ C$
Storage Temperature Range	T_{STG}	-55 ~ 150	$^\circ C$

DIMENSIONS

Item	Min (mm)	Max (mm)
A1	0.00	0.10
A2	0.80	1.00
A3	-	1.10
b	0.15	0.30
C	0.08	0.25
D	1.90	2.20
e	0.55	0.75
e1	1.20	1.40
E	2.00	2.20
E1	1.15	1.35
L	0.15	0.45
Y	1.18	
Y1	0.66	
Y2	2.50	
X	0.45	
X1	0.65	



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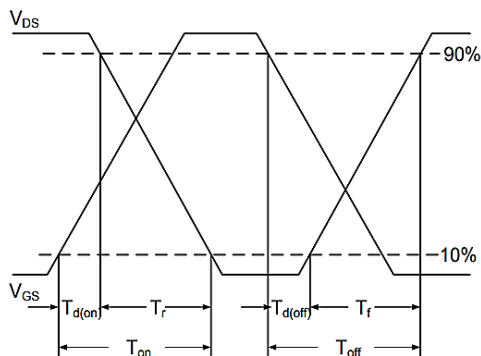
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ELECTRICAL CHARACTERISTICS

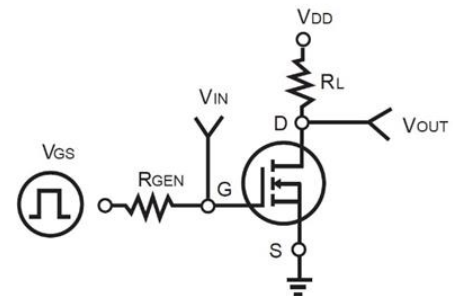
Static Characteristics	Conditions	Symbol	Min	Typ.	Max	Unit
Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=250\mu A$	BV_{DSS}	60	--	--	V
Gate Threshold Voltage	$V_{GS}=V_{DS}, I_D=250\mu A$	$V_{GS(th)}$	1.0	-	2.0	V
Gate Leakage Current	$V_{GS}=\pm 20V, V_{DS}=0V$	I_{GSS}	--	--	± 1	mA
Zero Gate Voltage Drain Current	$V_{DS}=60V, V_{GS}=0V$	I_{DSS}	--	--	1	μA
	$V_{DS}=60V, V_{GS}=0V, T_J=125^\circ C$		--	--	500	μA
On-State Drain Current	$V_{DS} \geq 2V, V_{GS}=10V$	$I_{D(ON)}$	0.5	--	--	A
Drain-Source On-Resistance	$V_{GS}=10V, I_D=0.5A$	$R_{DS(ON)}$	--	1900	3000	m Ω
	$V_{GS}=5V, I_D=0.3A$		--	2400	4000	m Ω
Forward Transconductance	$V_{DS}=2V, I_D=0.2A$	g_{FS}	0.08	--	--	S
Diode Forward Voltage	$I_S=0.115A, V_{GS}=0V$	V_{SD}	--	--	1.5	V
Dynamic Characteristics	Conditions	Symbol	Min	Typ.	Max	Unit
Turn-On Delay Time	$V_{DD}=25V, I_D \equiv -0.5A$	$T_{d(on)}$	--	7	20	ns
Turn-Off Delay Time	$V_{GEN}=10V, R_G=25\Omega, R_L=50\Omega$	$T_{d(off)}$	--	11	40	ns
Input Capacitance	$V_{DS}=25V, V_{GS}=0V$ $F=1MHz$	C_{iss}	--	17	50	pF
Output Capacitance		C_{oss}	--	10	25	pF
Reverse Transfer Capacitance		C_{rss}	--	3	5	pF

Note: $T_A = 25^\circ C$ unless otherwise noted

Switching Time Waveform



Switching Test Circuit



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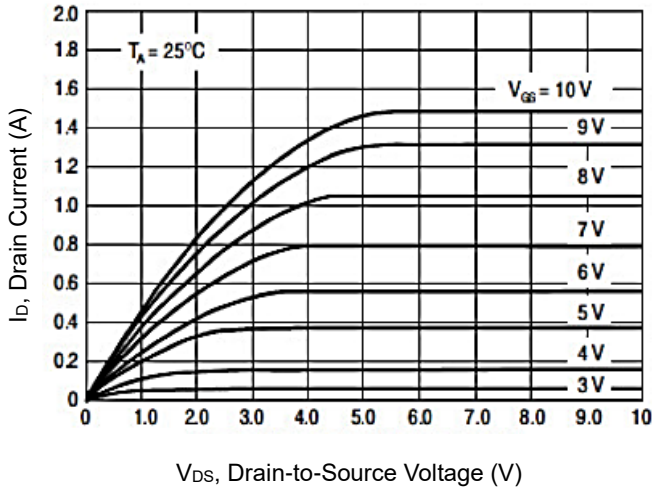
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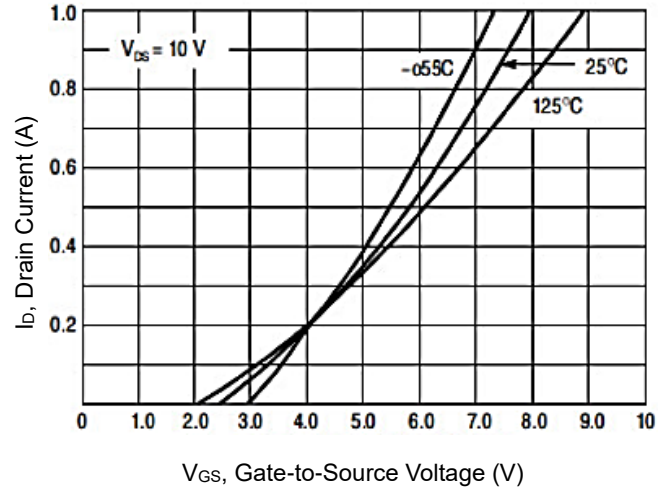
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CHARACTERISTIC CURVES

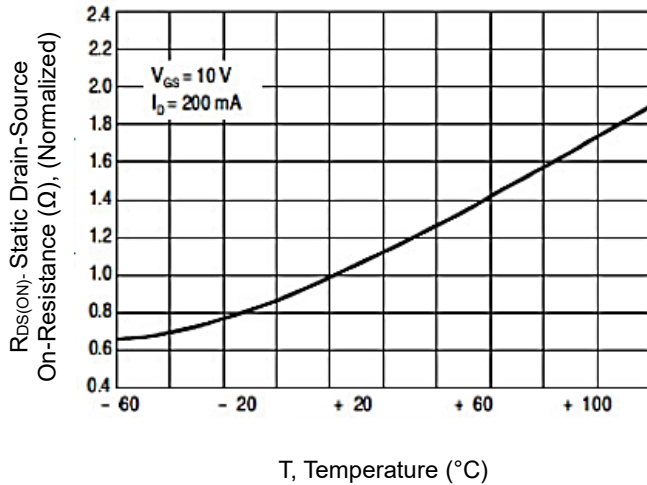
Output Characteristics



Transfer Characteristics



Static Drain-Source On-Resistance vs. T



Gate Threshold Voltage vs. T

