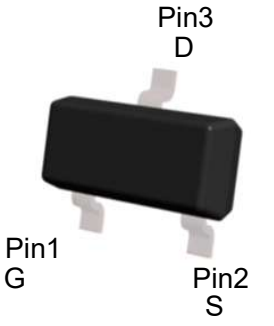
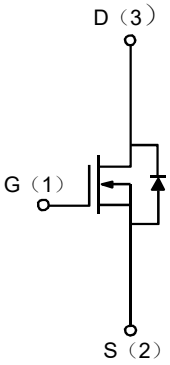
Description

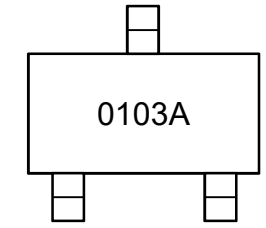
The MOSFET provide the best combination of fast switching, low on-resistance and cost-effectiveness.

MOSFET Product Summary		
V_{DS}(V)	$R_{DS(on)}$(Ω)	I_D(A)
100	0.23@ VGS=10V	2



SOT-23(Top View)





Marking (Top View)

Absolute maximum rating@25℃

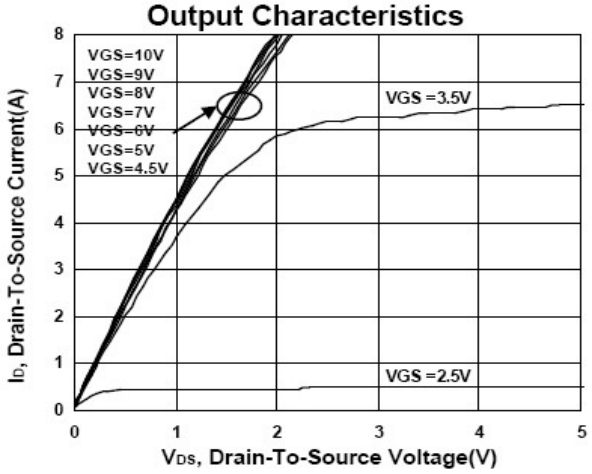
Parameter		Symbol	Value	Units
Drain-Source Voltage		V_{DS}	100	V
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Curren	T_A=25℃	I_D	2	A
	T_A=70℃		0.8	
Pulsed Drain Current[1]		I_{DM}	18	A
Avalanche Current		I_{AS}	18	A
Avalanche Energy	L=0.1mH	EAS	16.5	mJ
Maximum Power Dissipation	T_A=25℃	P_D	0.75	W
	T_A=70℃		0.3	
Operating Junction and Storage Temperature Range		T_J,T_{STG}	-55 to 150	℃
Thermal Resistance-Junction to Ambient		$R_{\theta JA}$	166	℃/W

Electrical characteristics per line@25℃(unless otherwise spspecified)

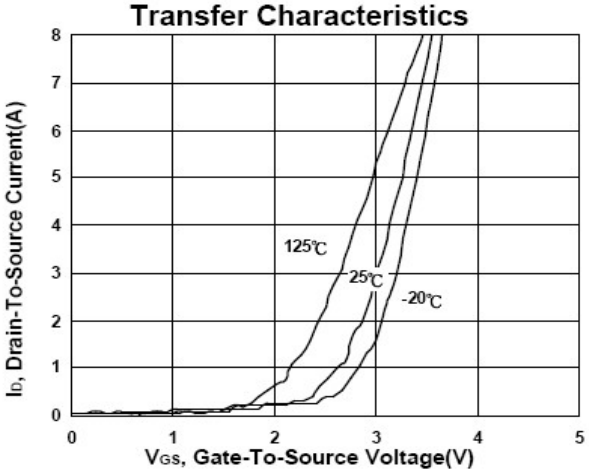
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
OFF/ON CHARACTERISTICS						
STATIC PARAMETERS						
Drain-Source Breakdown Voltage	BV_{DSS}	I_D =250μA,V_{GS}=0V	100		-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} =80V,V_{GS}=0V	-	-	1	μA
		V_{DS}=80V,V_{GS}=0 V T_J=1255℃			10	
Gate-Body Leakage	I_{GSS}	V_{DS} =0V,V_{GS}=±20V	-	-	±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	1.0	1.5	2.0	V
On-State Drain Current[1]	$I_{D(ON)}$	V_{DS} = 10V, V_{GS} = 10V	18			A
Drain-Source On- Static Resistance[1]	$R_{DS(ON)}$	V_{GS}=10V, I_D =2A	-	0.2	0.23	Ω
		V_{GS}=5V, I_D =1A	-	0.22	0.25	Ω
Forward Transconductance[1]	g_{fs}	V_{DS} = 10V, I_D = 2A		10		S
DYNAMIC PARAMETERS						
Input Capacitance	C_{ISS}	V_{GS}=0V, V_{DS} =25V, f=1MHz	-	800		pF
Output Capacitance	C_{OSS}		-	80		pF
Reverse Transfer Capacitance	C_{RSS}		-	40		pF
Gate Resistance	R_g	V_{GS} = 0V, V_{DS} = 0V, f = 1MHz		2.5		Ω
Total Gate Charge[2]	Q_g	V_{DS} = 50V, V_{GS} = 10V, I_D = 2A		15		nC
Gate-Source Charge[2]	Q_{gs}			2		
Gate-Drain Charge[2]	Q_{gD}			4		
Turn-On Delay Time[2]	$t_{d(on)}$	V_{DD} = 50V,I_D @ 2A, V_{GS} = 10V, R_{GS} = 6Ω		16		nS
Rise Time[2]	t_r			330		
Turn-Off Delay Time[2]	$t_{d(off)}$			39		
Fall Time[2]	t_f			111		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICE (TJ = 25 °C)						
Continuous Current	I_S				10	A
Forward Voltage1	V_{SD}	I_F = 2A, V_{GS} = 0V			1.4	V
Reverse Recovery Time	t_{rr}	I_F = 2A, dI/dt = 500A/μS		75		nS
Reverse Recovery Charge	Q_{rr}			0.17		nC

Typical Characteristics

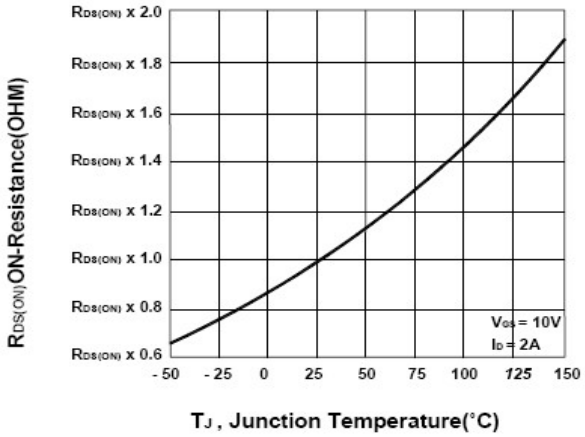
Output Characteristics



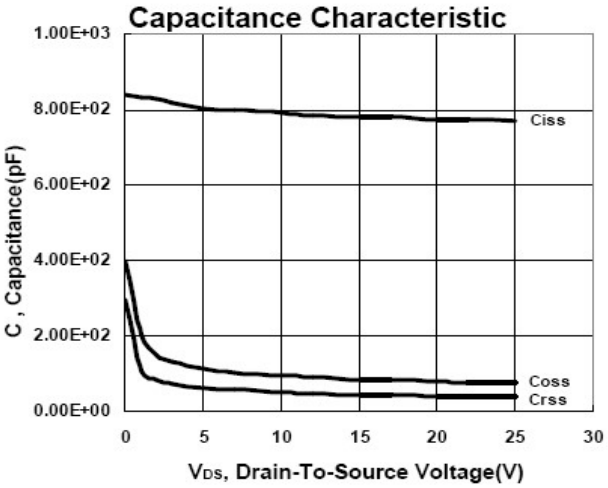
Transfer Characteristics



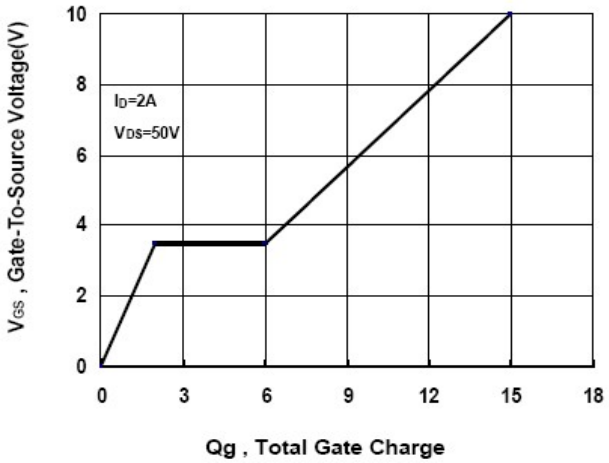
On-Resistance VS Temperature



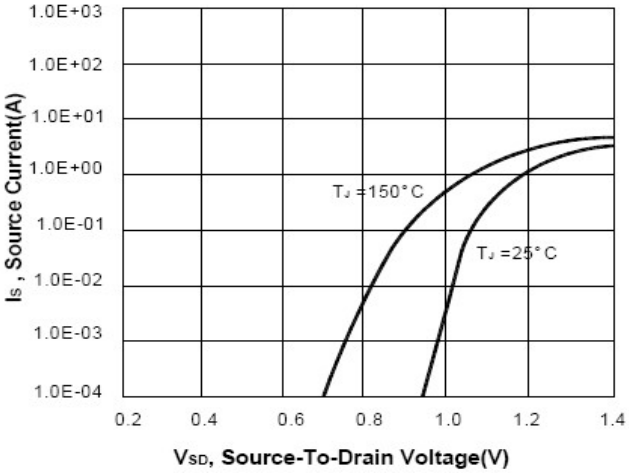
Capacitance Characteristic



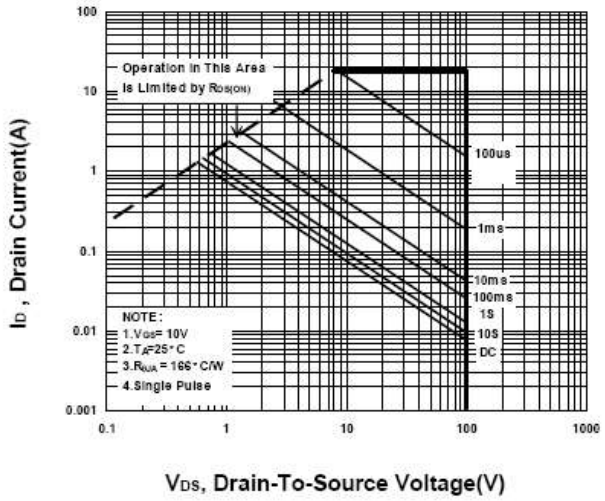
Gate charge Characteristics



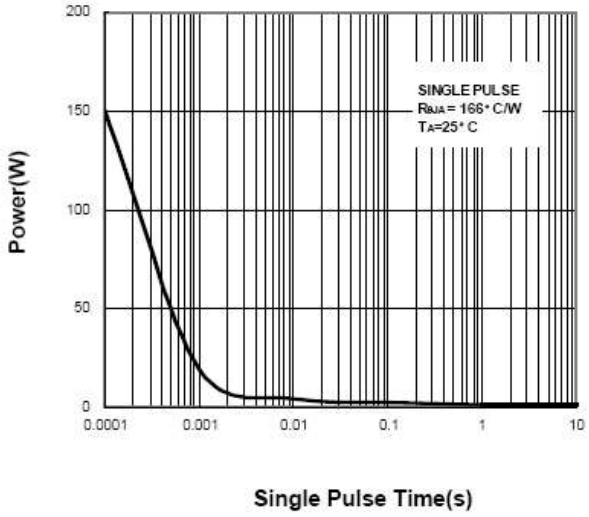
Source-Drain Diode Forward Voltage



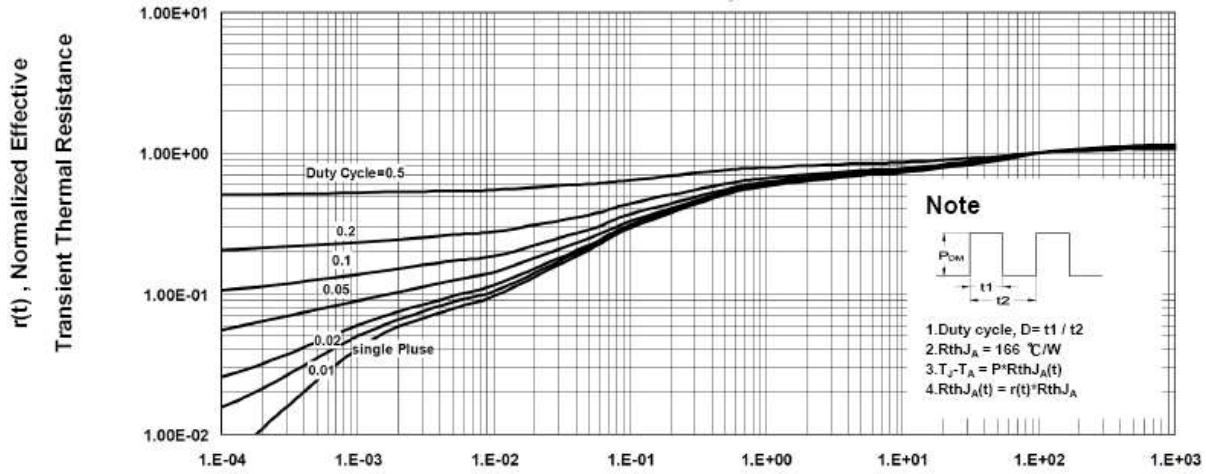
Safe Operating Area



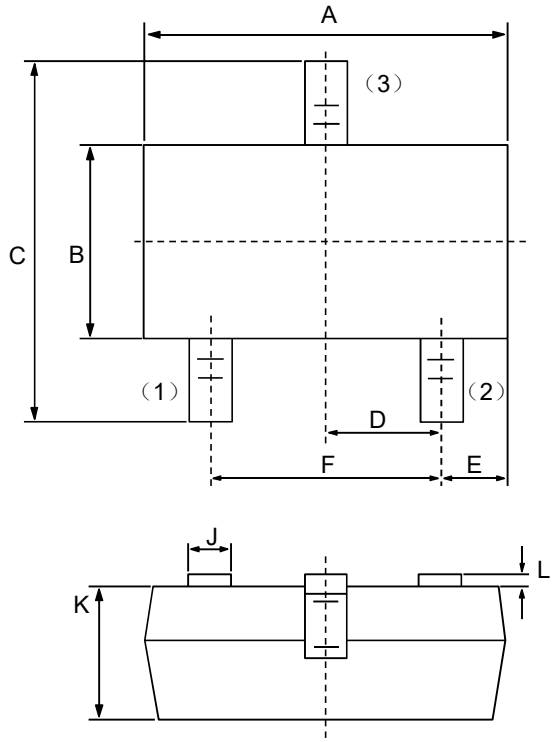
Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve



Product dimension(SOT-23)



Dim	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	2.80	3.00	0.1102	0.1197
B	1.20	1.40	0.0472	0.0551
C	2.10	2.50	0.0830	0.0984
D	0.89	1.02	0.0350	0.0401
E	0.45	0.60	0.0177	0.0236
F	1.78	2.04	0.0701	0.0807
G	0.085	0.177	0.0034	0.0070
H	0.45	0.60	0.0180	0.0236
J	0.37	0.50	0.0150	0.0200
K	0.89	1.11	0.0350	0.0440
L	0.013	0.100	0.0005	0.0040
θ	0°	10°	0°	10°

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