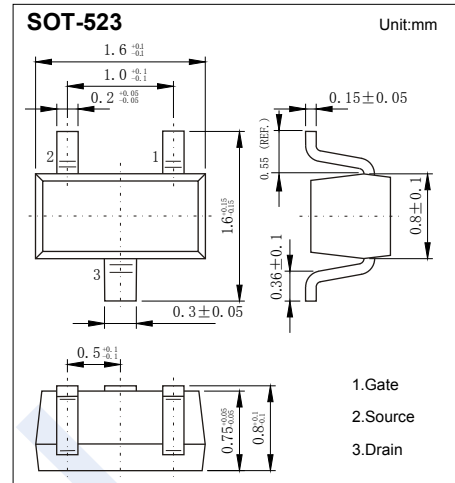
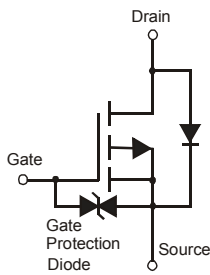


P-Channel MOSFET

DMG1013T (KMG1013T)

■ Features

- $V_{DS} (V) = -20V$
- $I_D = -0.46 A$
- $R_{DS(ON)} < 0.7 \Omega$ ($V_{GS} = -4.5V$)
- $R_{DS(ON)} < 0.9 \Omega$ ($V_{GS} = -2.5V$)
- $R_{DS(ON)} < 1.3 \Omega$ ($V_{GS} = -1.8V$)
- ESD Protected Up To 3KV



■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	± 6	
Continuous Drain Current	I_D	$T_a = 25^\circ C$	-0.46
		$T_a = 85^\circ C$	-0.33
Pulsed Drain Current	I_{DM}	-6	A
Power Dissipation	P_D	0.27	W
Thermal Resistance.Junction- to-Ambient	R_{thJA}	461	$^\circ C/W$
Junction Temperature	T_J	150	$^\circ C$
Junction Storage Temperature Range	T_{stg}	-55 to 150	

P-Channel MOSFET

DMG1013T (KMG1013T)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =-250 μA, V _{GS} =0V	-20			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-20V, V _{GS} =0V			-1	μA
Gate-Body leakage current	I _{GSS}	V _{DS} =0V, V _{GS} =±4.5V			±2	μA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250μA	-0.5		-1	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =-4.5V, I _D =-0.35A			0.7	Ω
		V _{GS} =-2.5V, I _D =-0.3A			0.9	
		V _{GS} =-1.8V, I _D =-0.15A			1.3	
Forward Transconductance	g _{FS}	V _{DS} =-10V, I _D =-0.25A		0.9		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =-16V, f=1MHz		59.76		pF
Output Capacitance	C _{oss}			12.07		
Reverse Transfer Capacitance	C _{rss}			6.36		
Total Gate Charge	Q _g	V _{GS} =-4.5V, V _{DS} =-10V, I _D =-250mA		622.4		nC
Gate Source Charge	Q _{gs}			100.3		
Gate Drain Charge	Q _{gd}			132.2		
Turn-On DelayTime	t _{d(on)}	V _{DD} = -10V, V _{GS} = -4.5V, R _L = 47Ω, R _G = 10Ω, I _D = -200mA		5.1		ns
Turn-On Rise Time	t _r			8.1		
Turn-Off DelayTime	t _{d(off)}			28.4		
Turn-Off Fall Time	t _f			20.7		
Diode Forward Voltage	V _{SD}	I _S =-150mA, V _{GS} =0V			-1.2	V

■ Marking

Marking	PA1
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P-Channel MOSFET DMG1013T (KMG1013T)

■ Typical Characteristics

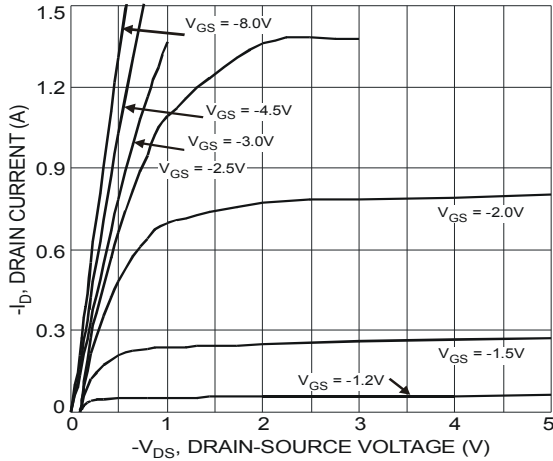


Fig. 1 Typical Output Characteristic

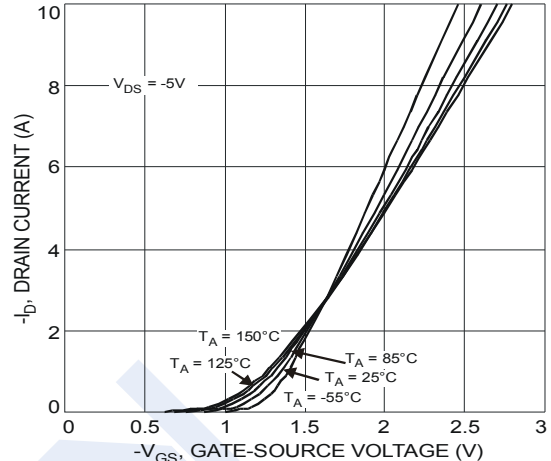


Fig. 2 Typical Transfer Characteristic

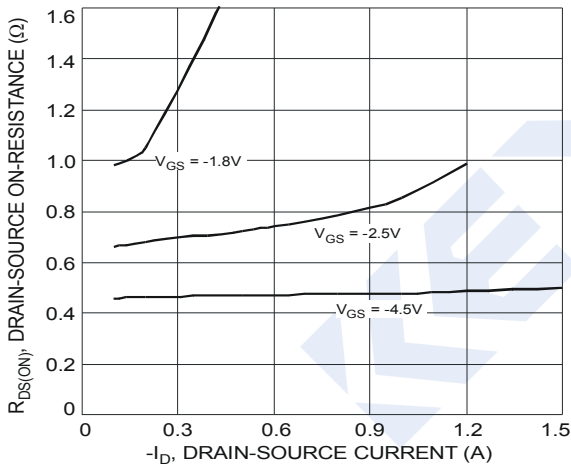


Fig. 3 Typical On-Resistance vs. Drain Current and Gate Voltage

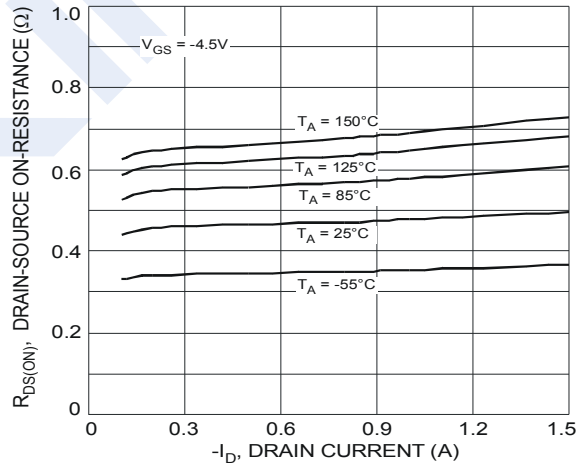


Fig. 4 Typical On-Resistance vs. Drain Current and Temperature

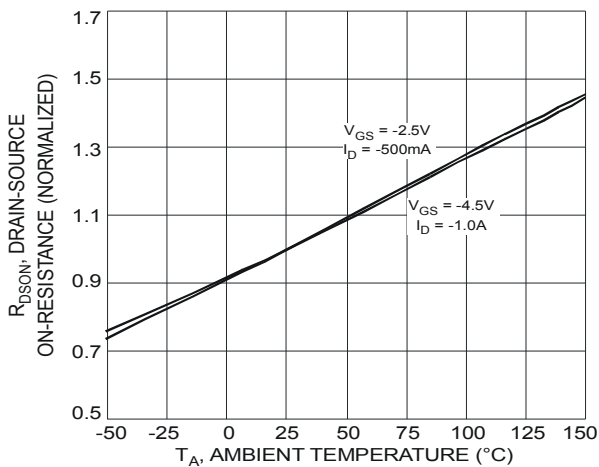


Fig. 5 On-Resistance Variation with Temperature

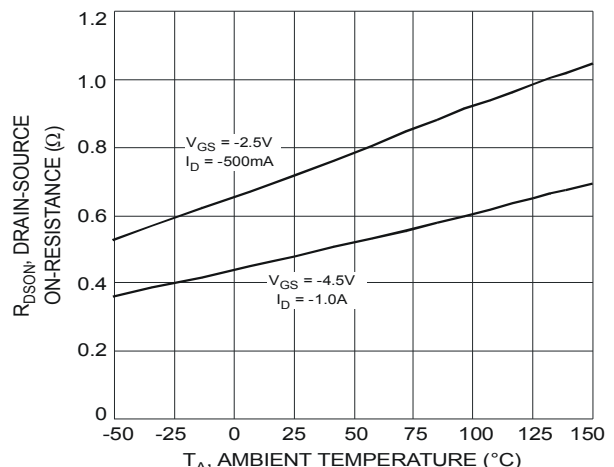


Fig. 6 On-Resistance Variation with Temperature

P-Channel MOSFET DMG1013T (KMG1013T)

■ Typical Characteristics

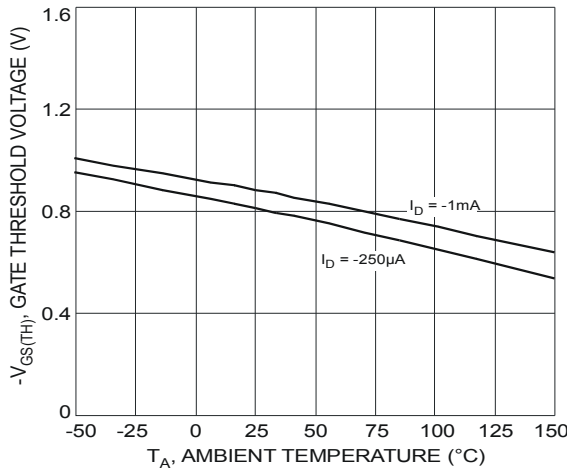


Fig. 7 Gate Threshold Variation vs. Ambient Temperature

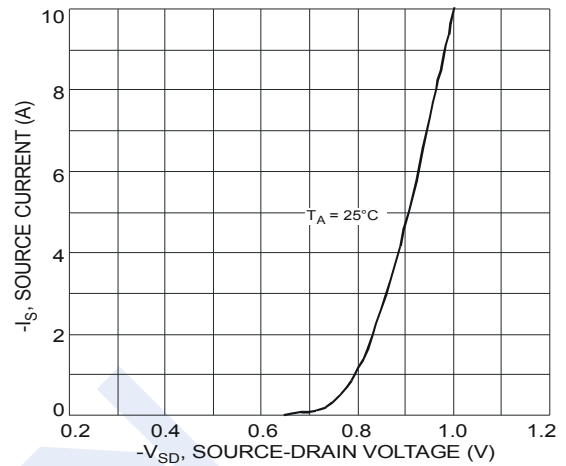


Fig. 8 Diode Forward Voltage vs. Current

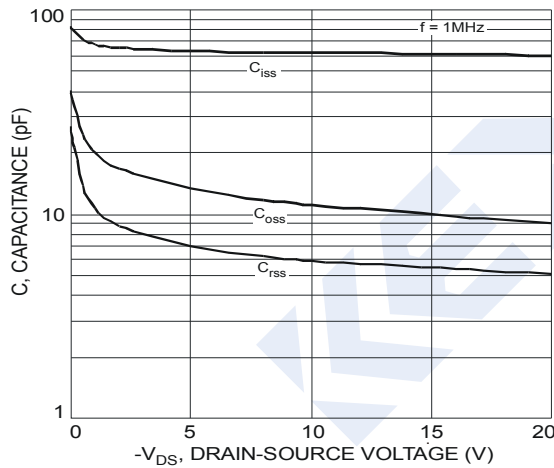


Fig. 9 Typical Total Capacitance

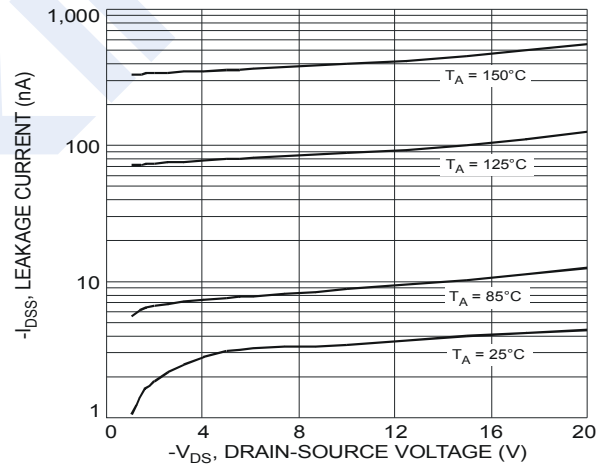


Fig. 10 Typical Leakage Current vs. Drain-Source Voltage

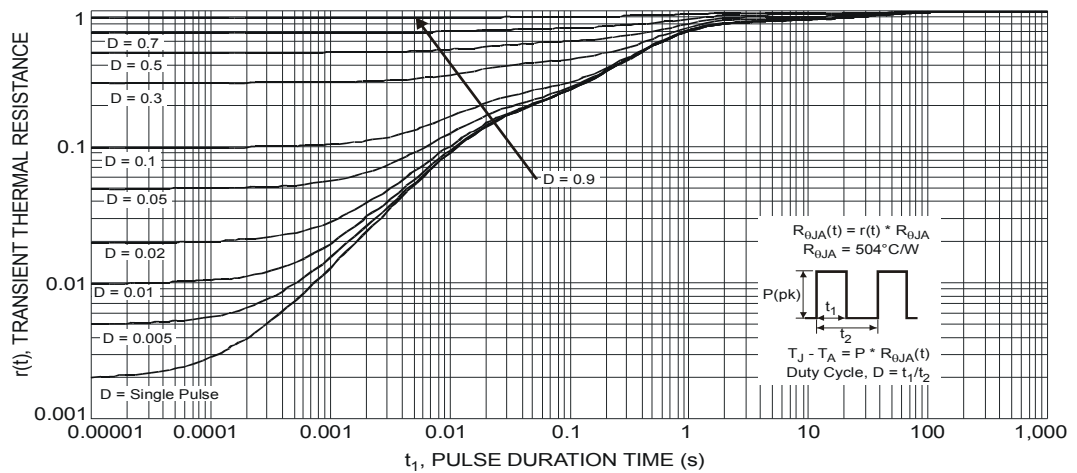


Fig. 11 Transient Thermal Response