

-60V P-Channel Enhancement Mode Power MOSFET

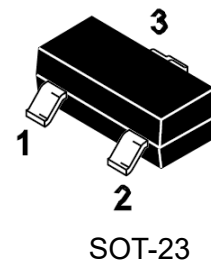
DESCRIPTION :

- Halogen and Antimony Free

TYPICAL APPLICATIONS :

- Power management
- PWM application
- Load switch

V_{DS}	-60V
I_D	-2A
$R_{DS(ON)_MAX. @V_{GS}=-10V}$	200m Ω



MAXIMUM RATINGS (at $T_c = 25\text{ }^\circ\text{C}$, unless otherwise specified)

Characteristic	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-60	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	-2	A
Drain Current-Pulsed	I_{DM}	-8	A
Power dissipation	P_D	0.9	W
Junction temperature Range	T_J	150	$^\circ\text{C}$
Storage temperature Range	T_{STG}	-55~+150	$^\circ\text{C}$

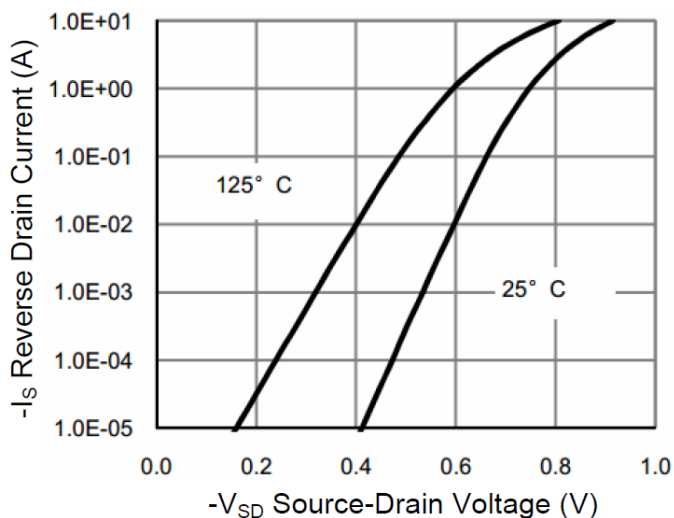
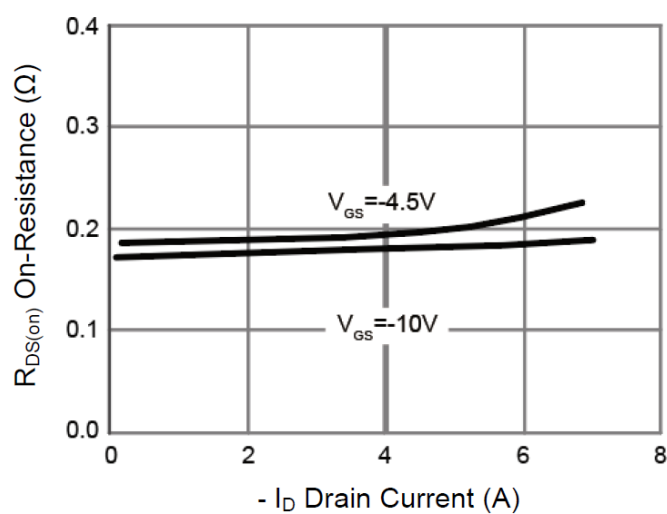
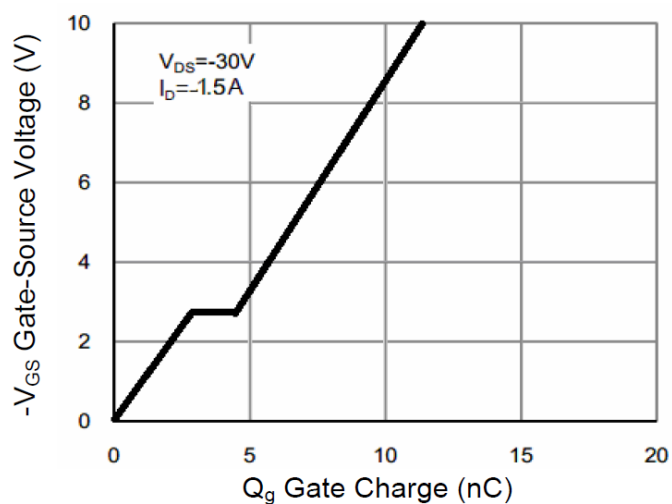
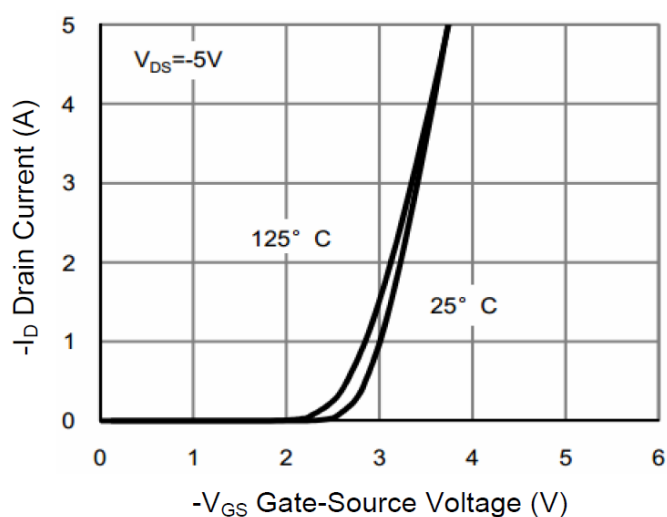
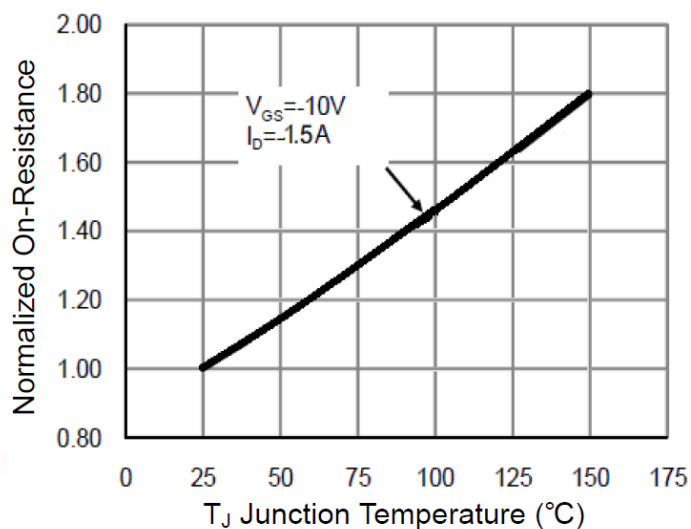
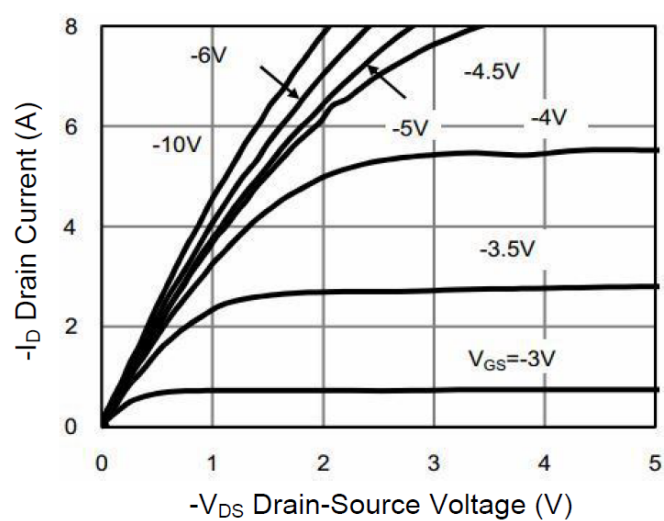
THERMAL CHARACTERISTICS

Characteristic	Condition	Symbol	Value	Unit
Thermal resistance,	Junction to Ambient	$R_{\theta JA}$	139	$^\circ\text{C/W}$

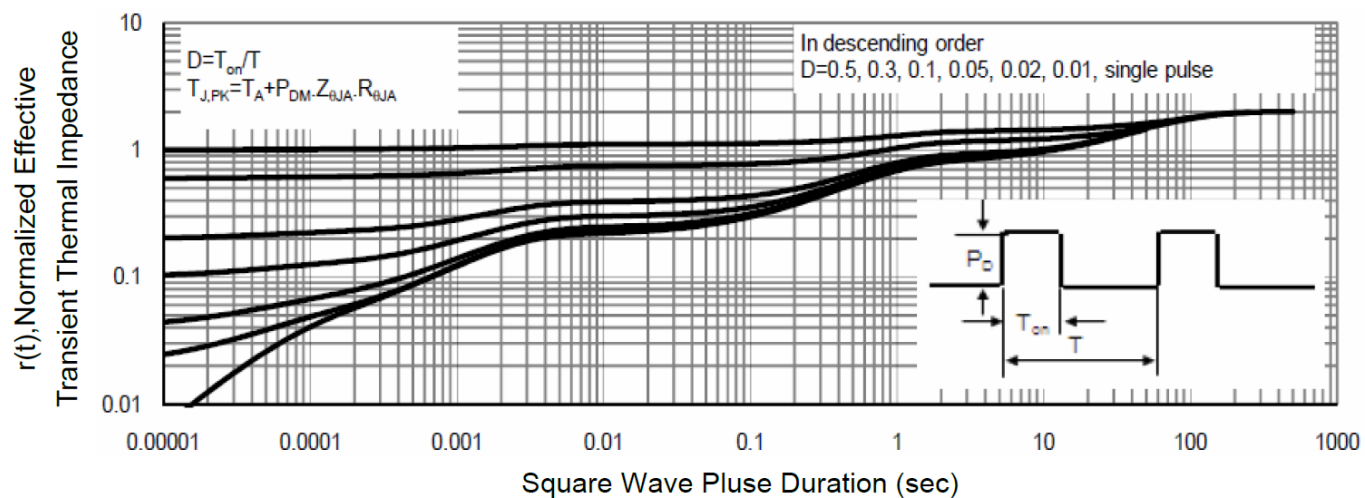
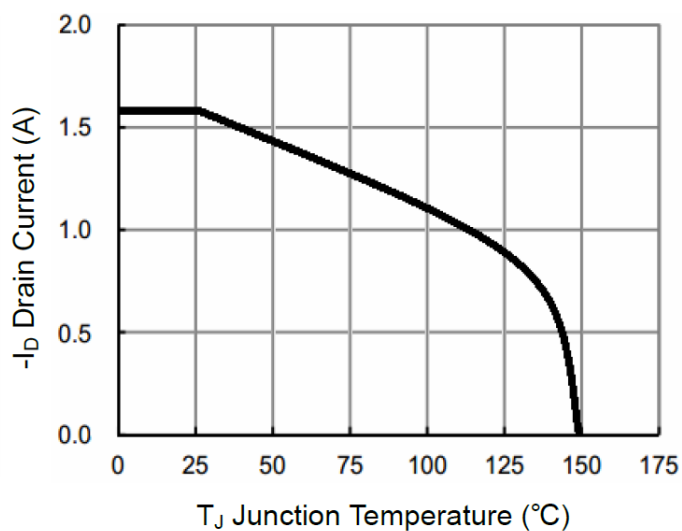
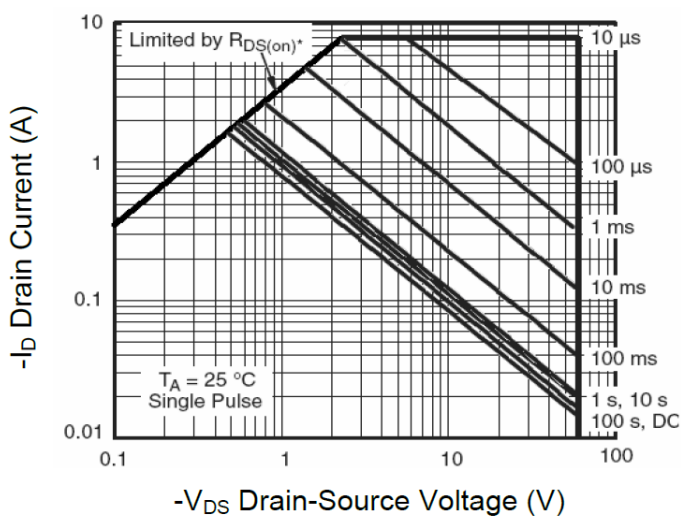
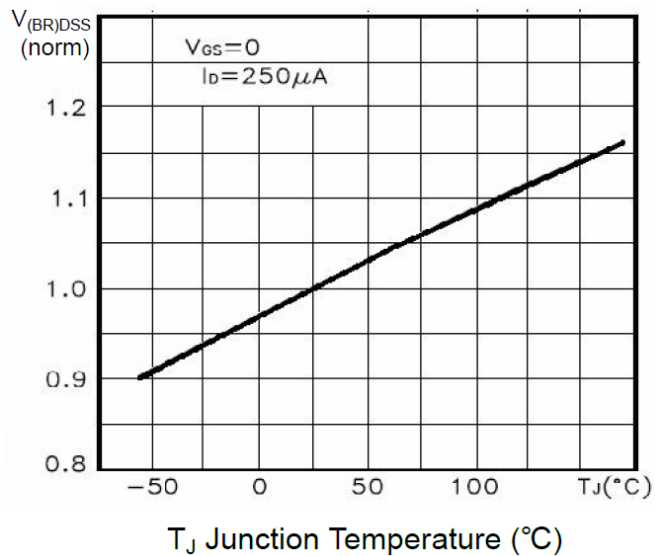
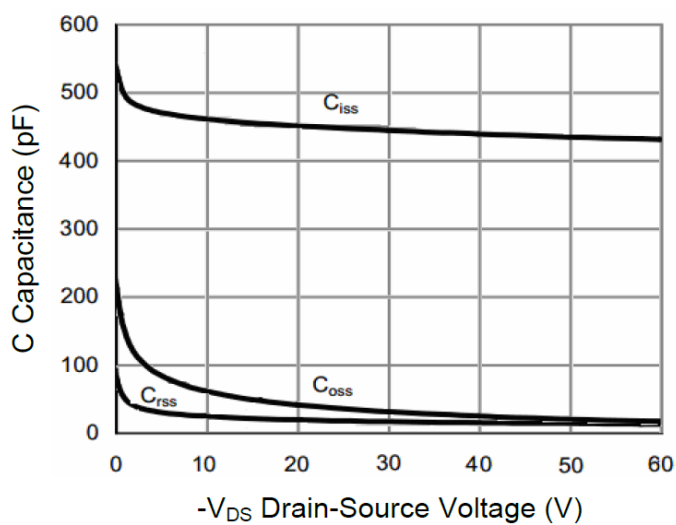
ELECTRICAL CHARACTERISTICS (at $T_J = 25\text{ }^\circ\text{C}$, unless otherwise specified)

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage VGS = 0V, ID = -250uA	$V_{(BR)DSS}$	-60			V
Zero Gate Voltage Drain Current VDS = -60 V, VGS = 0 V	I_{DSS}			-1	uA
Gate-Source Leakage Current VGS = ± 20 V, VDS = 0V	I_{GSS}			± 100	uA
Gate-Source threshold voltage VDS = VGS, ID = -250uA	$V_{GS(th)}$	-1.0	-1.8	-3.0	V
Drain-Source On-State Resistance VGS = -10V, ID = -2A VGS = -4.5V, ID = -1A	$R_{DS(on)}$		175 190	200 300	m Ω
Forward Transconductance VDS = -5 V, ID = -1A	g_{fs}		4		S
Input capacitance f=1MHz, VDS=-30V, VGS=0 V	C_{iss}		444.2		pF
Output capacitance f=1MHz, VDS=-30V, VGS=0 V	C_{oss}		19.6		pF
Reverse transfer capacitance f=1MHz, VDS=-30V, VGS=0 V	C_{rss}		17.9		pF
Total Gate Charge VDD= -30V, VGS= -10V, ID=-1.5A	Q_g		11.3		nC
Gate-Source Charge VDD= -30V, VGS= -10V, ID=-1.5A	Q_{gs}		2.7		nC
Gate-Drain Charge VDD= -30V, VGS= -10V, ID=-1.5A	Q_{gd}		1.6		nC
Turn-on delay time VDD= -30V, VGS=-10V, ID=-1.5A, $R_{GEN}=3\Omega$	$t_{d(ON)}$		40		nS
Rise time VDD= -30V, VGS=-10V, ID=-1.5A, $R_{GEN}=3\Omega$	t_r		35		nS
Turn-off delay time VDD= -30V, VGS=-10V, ID=-1.5A, $R_{GEN}=3\Omega$	$t_{d(OFF)}$		15		nS
Fall time VDD= -30V, VGS=-10V, ID=-1.5A, $R_{GEN}=3\Omega$	t_f		10		nS
Continuous Current	I_s			-2	A
Diode Forward Voltage VGS = 0V, IS = - 2A	V_{SD}			-1.2	V

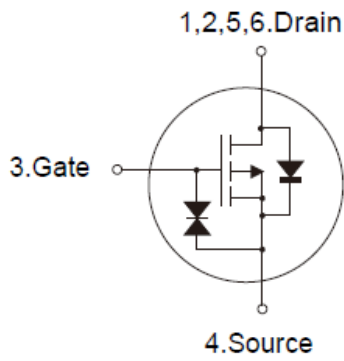
Typical Performance Characteristics



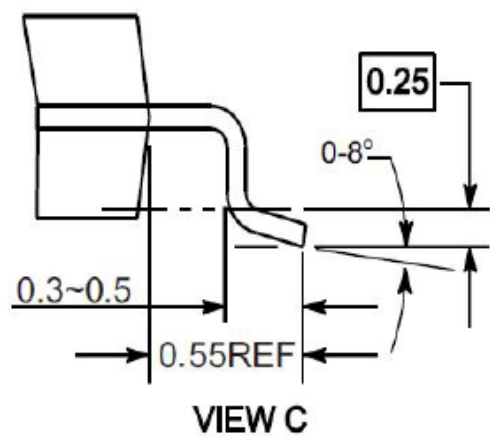
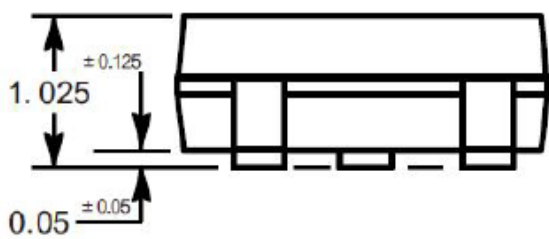
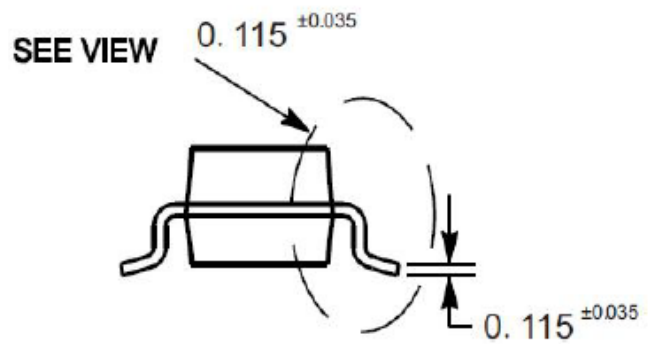
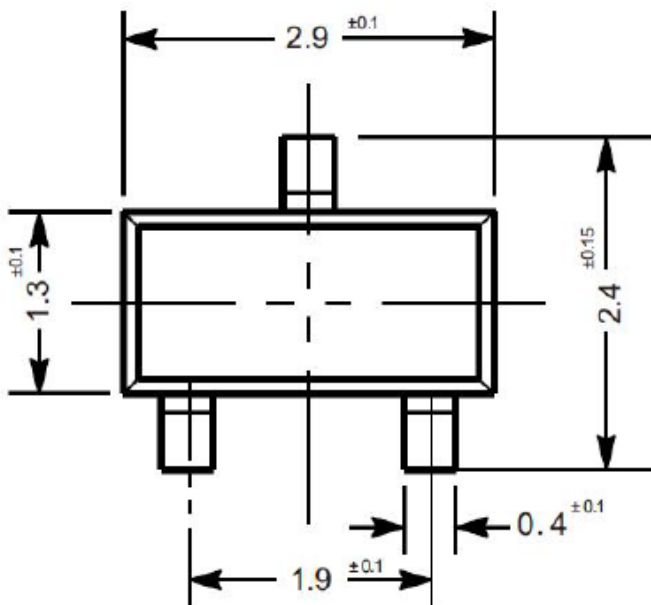
Typical Performance Characteristics



·Circuit diagram



·Package outlines : Dimensions in (mm)



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