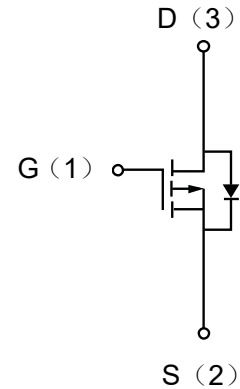


Description

The enhancement mode MOS is extremely high density cell and low on-resistance.

MOSFET Product Summary		
V _{DS} (V)	R _{DS(on)} (Ω)	I _D (A)
-30	0.058 @ V _{GS} =-10V	-3
	0.075 @ V _{GS} =-4.5V	


Electrical characteristics per line@25°C (unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
OFF/ON CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV _{DSS}	I _D = -250μA, V _{GS} = 0V	-30		-	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -30V, V _{GS} = 0V	-	-	-1	μA
Gate-Body Leakage Current	I _{GSS}	V _{DS} = 0V, V _{GS} = ±20V	-	-	±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250μA	-1	-	-3	V
Static Drain-Source On-Resistance ^a	R _{DS(ON)}	V _{GS} = -4.5V, I _D = -2.5A	-	75	95	mΩ
		V _{GS} = -10V, I _D = -3.2A	-	58	70	mΩ
DYNAMIC PARAMETERS						
Input Capacitance	C _{ISS}	V _{GS} = 0V, V _{DS} = -15V, f = 1MHz	-	460		pF
Output Capacitance	C _{OSS}		-	74		pF
Reverse Transfer Capacitance	C _{RSS}		-	23		pF
SWITCHING PARAMETERS						
Turn-On Delay Time	t _{d(on)}	V _{DS} = -15V, V _{GS} = -10V, R _G = 6Ω, R _L = 15Ω	-	33		ns
Turn-Off Delay Time	t _{d(off)}		-	39		ns
Turn-On Rise Time	t _r		-	17		ns
Turn-On Fall Time	t _f		-	5		ns
Total Gate Charge	Q _g	V _{DS} = -15V, V _{GS} = -10V, I _D = -1.7A		14		nC
Total Gate Charge	Q _g	V _{DS} = -15V, V _{GS} = -4.5V, I _D = -1.7A		6.8		nC
Gate-Source Charge	Q _{gs}			2.8		nC
Gate-Drain Charge	Q _{gd}			2.3		nC
Gate resistance	R _g	V _{DS} = 0V, V _{GS} = 0V, f = 1MHz		3.5		Ω
Drain-Source Diode Forward Voltage	V _{SD}	V _{GS} = 0V, I _S = -1.0A		-0.8	-1.2	V

Absolute maximum rating@25°C

Parameter	Symbol	Value	Units
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current ($T_J=150^\circ\text{C}$)	I_D	$T_A=25^\circ\text{C}$	-3
		$T_A=70^\circ\text{C}$	-2.5
Pulsed Drain Current	I_{DM}	-12	A
Maximum Power Dissipation	P_D	$T_A=25^\circ\text{C}$	1.04
		$T_A=70^\circ\text{C}$	0.67
Operating Junction and Storage Temperature Range	T_J	-55 to 150	$^\circ\text{C}$
Thermal Resistance-Junction to Ambient	$R_{\theta JA}$	120	$^\circ\text{C/W}$

Typical Characteristics

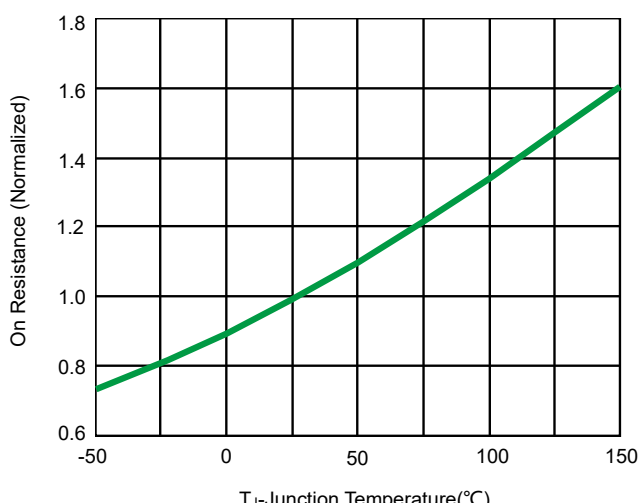


Fig 1. On Resistance vs. Junction Temperature

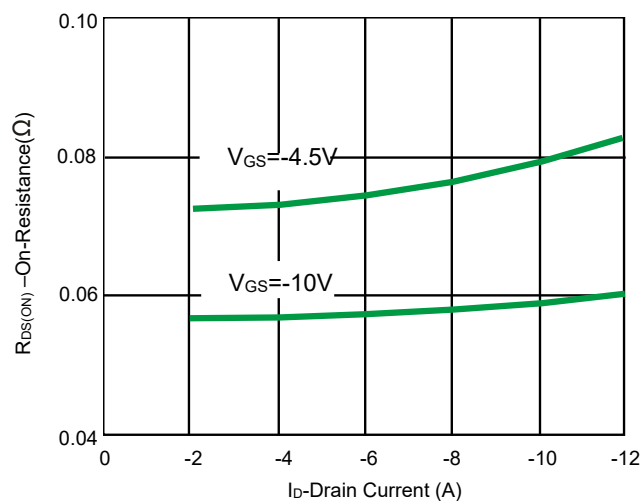


Fig 2. On-Resistance vs. Drain Current

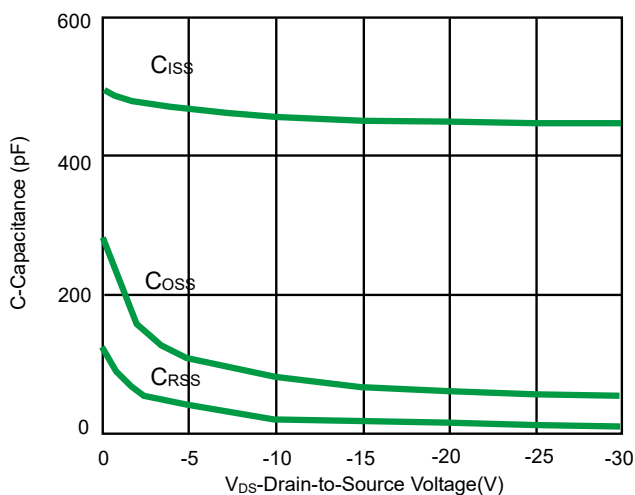


Fig 3. Capacitance

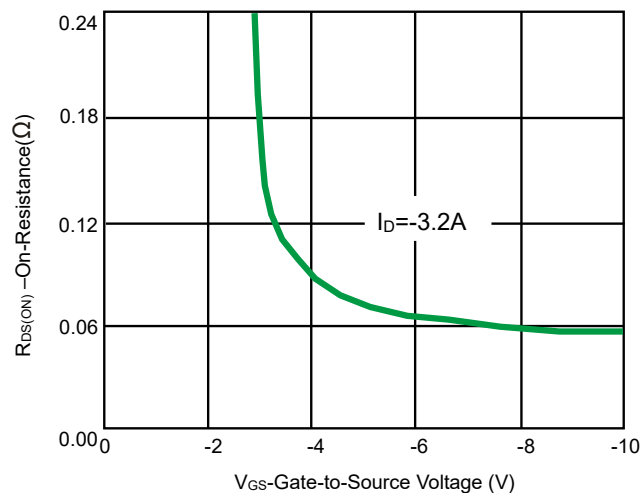


Fig 4. On-Resistance vs. Gate-to-Source Voltage

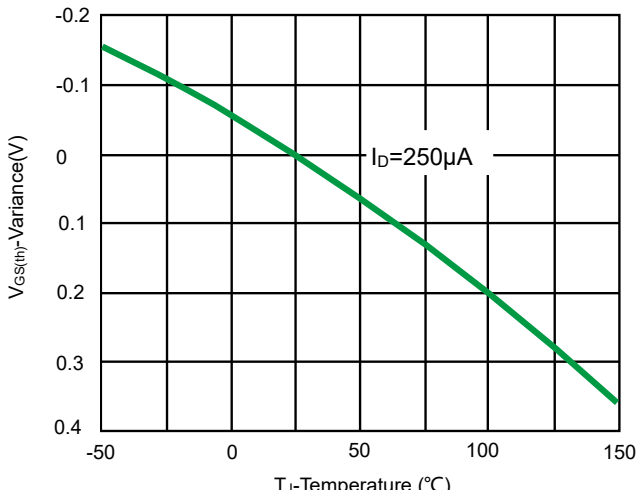


Fig 5. Threshold Voltage

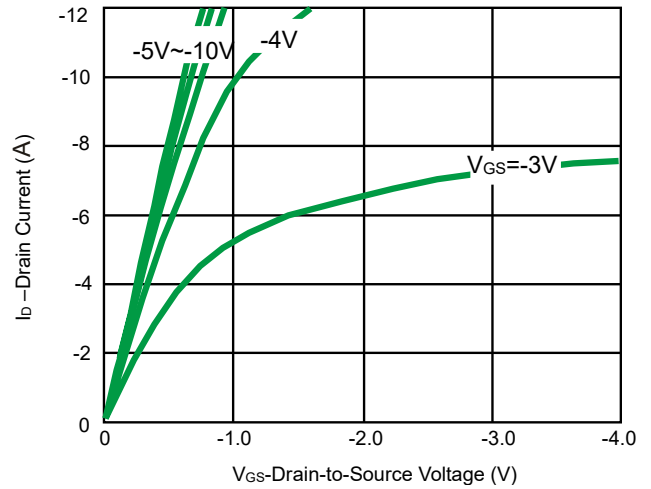


Fig 6. On-Region Characteristics

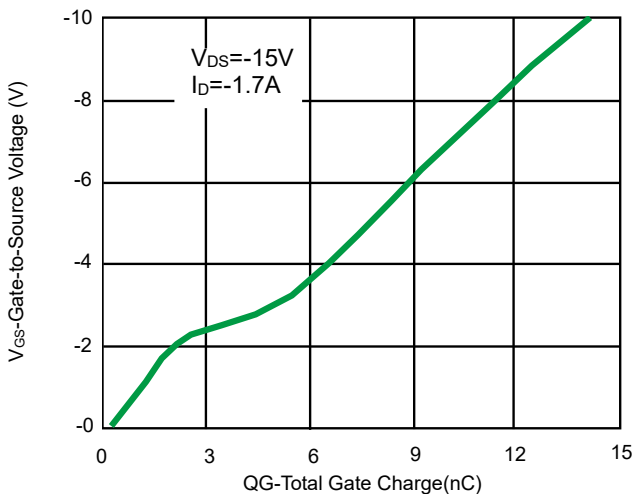


Fig 7. Gate Charge

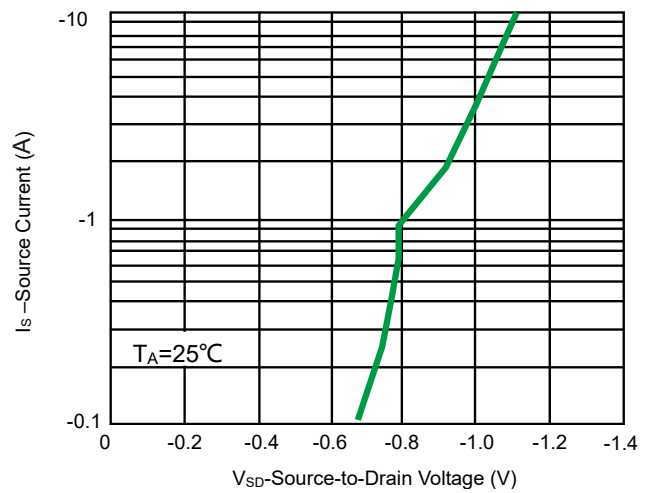


Fig 8. On-Resistance vs. Drain Current

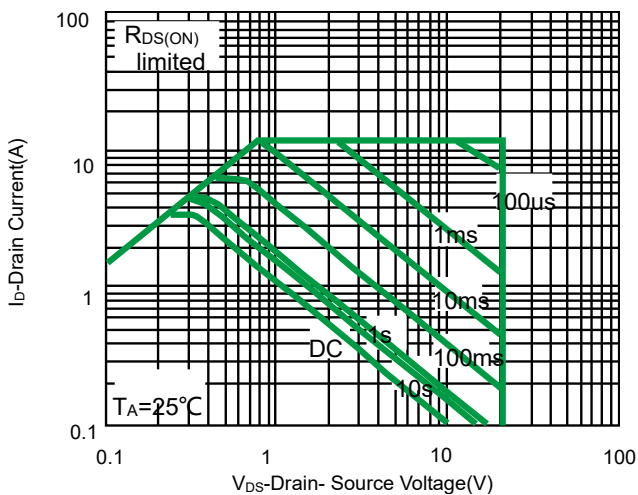


Fig 9. Maximum Forward Biased Safe Operating Area

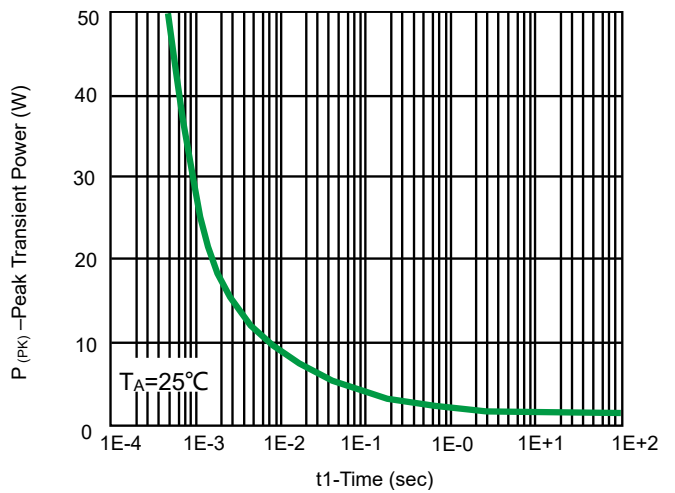


Fig 10. Single Pulse Maximum Power Dissipation

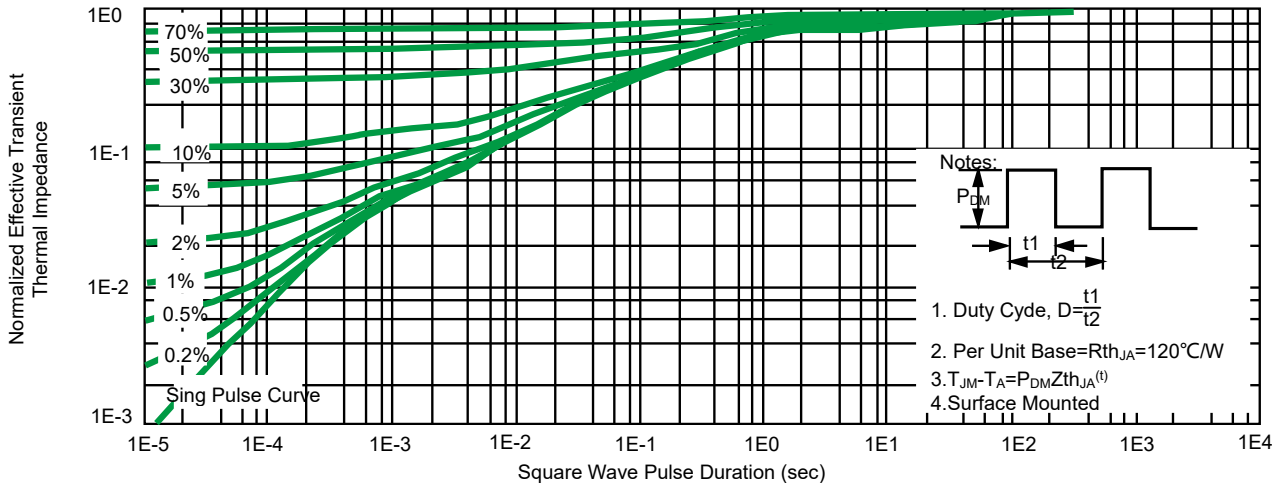
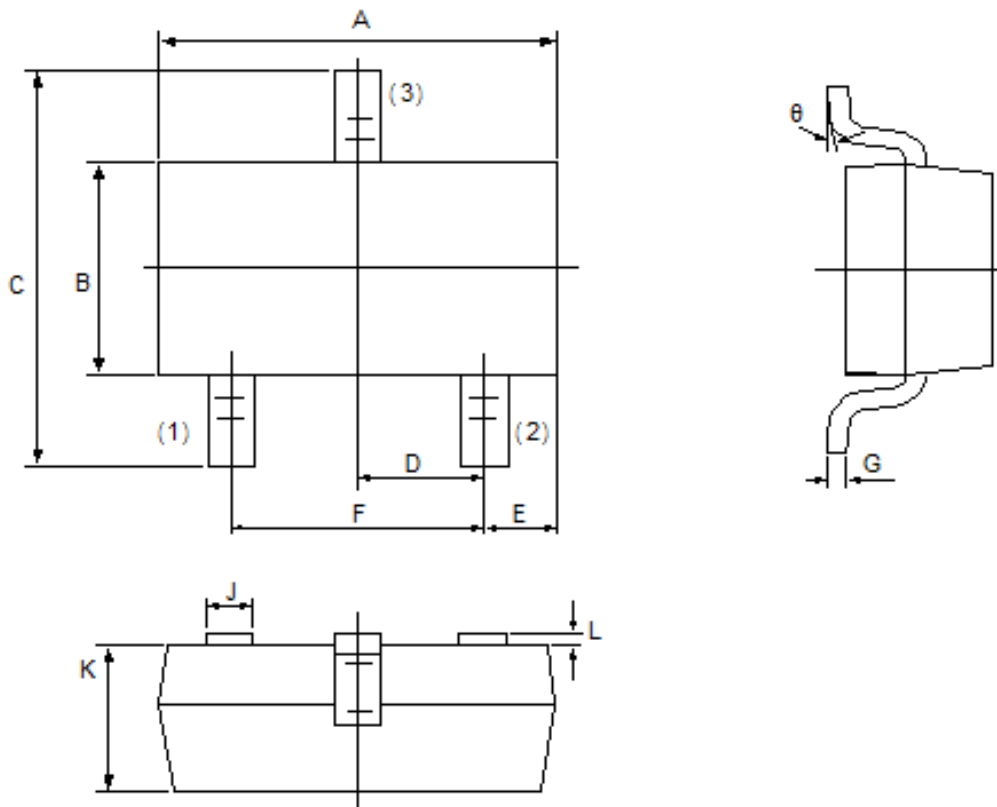


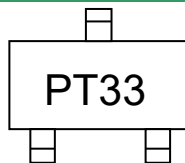
Fig 11. Normalized Thermal Transient Impedance, Junction-to-Ambient

Product dimension(SOT-23)



Dim	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	2.72	3.12	0.107	0.123
B	1.10	1.50	0.043	0.059
C	2.10	2.64	0.083	0.104
D	0.95 BSC		0.037 BSC	
E	0.50 BSC		0.020 BSC	
F	1.90 BSC		0.075 BSC	
G	0.08	0.21	0.003	0.008
J	0.30	0.50	0.012	0.020
K		1.35		0.053
L	0.013	0.15	0.001	0.006
θ	0°	10°	0°	10°

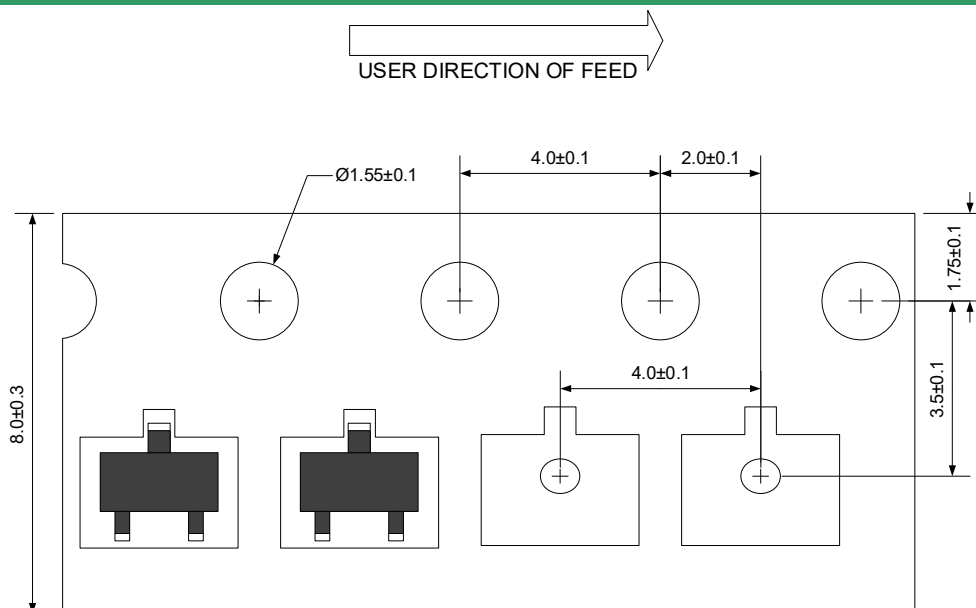
Marking information



Ordering information


Device	Package	Reel	Shipping
PPMT30V3	SOT-23 (Pb-Free)	7"	3000 / Tape & Reel

Load with information



Unit:mm


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