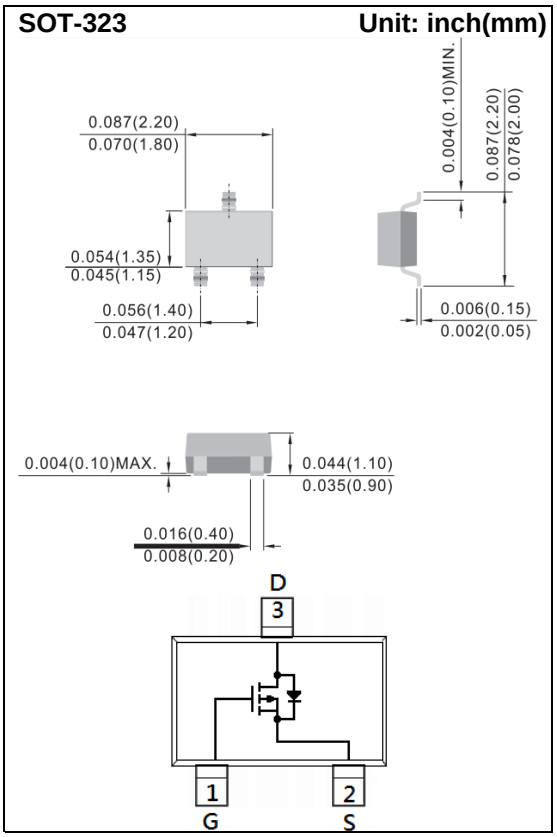
PJC7407

20V P-Channel Enhancement Mode MOSFET

Voltage	-20 V	Current	-1.3A



Features

- $R_{DS(ON)}$, V_{GS}@-4.5V, I_D@-1.3A<125mΩ
- $R_{DS(ON)}$, V_{GS}@-2.5V, I_D@-1.0A<150mΩ
- $R_{DS(ON)}$, V_{GS}@-1.8V, I_D@-0.5A<200mΩ
- Advanced Trench Process Technology
- Specially Designed for Switch Load, PWM Application, etc.
- Lead free in compliance with EU RoHS 2011/65/EU directive.
- Green molding compound as per IEC61249 Std. (Halogen Free)

Mechanical Data

- Case : SOT-323 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0002 ounces, 0.005 grams
- Marking : C07

Maximum Ratings and Thermal Characteristics (T_A=25°C unless otherwise noted)

PARAMETER		SYMBOL	LIMIT	UNITS
Drain-Source Voltage		V_{DS}	-20	V
Gate-Source Voltage		V_{GS}	±12	V
Continuous Drain Current		I_D	-1.3	A
Pulsed Drain Current (Note 4)		I_{DM}	-5.2	A
Power Dissipation	T_a=25°C	P_D	350	mW
	Derate above 25°C		2.8	mW/°C
Operating Junction and Storage Temperature Range		T_J,T_{STG}	-55~150	°C
Typical Thermal resistance - Junction to Ambient (Note 3)		$R_{\theta JA}$	357	°C/W

PJC7407

Electrical Characteristics (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Static						
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V, I_D=-250uA	-20	-	-	V
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=-250uA	-0.4	-0.69	-1.2	V
Drain-Source On-State Resistance	$R_{DS(on)}$	V_{GS}=-4.5V, I_D=-1.3A	-	101	125	mΩ
		V_{GS}=-2.5V, I_D=-1.0A	-	120	150	
		V_{GS}=-1.8V, I_D=-0.5A	-	139	200	
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-20V, V_{GS}=0V	-	-0.01	-1	uA
Gate-Source Leakage Current	I_{GSS}	V_{GS}=±12V, V_{DS}=0V	-	±10	±100	nA
Dynamic						
Total Gate Charge	Q_g	V_{DS}=-10V, I_D=-1.3A, V_{GS}=-4.5V (Note 1,2)	-	5.4	-	nC
Gate-Source Charge	Q_{gs}		-	0.7	-	
Gate-Drain Charge	Q_{gd}		-	1.4	-	
Input Capacitance	Ciss	V_{DS}=-10V, V_{GS}=0V, f=1.0MHZ	-	416	-	pF
Output Capacitance	Coss		-	43	-	
Reverse Transfer Capacitance	Crss		-	32	-	
Switching						
Turn-On Delay Time	$td_{(on)}$	V_{DD}=-10V, I_D=-1.3A, V_{GS}=-4.5V, R_G=6Ω (Note 1,2)	-	3.9	-	ns
Turn-On Rise Time	tr			27	-	
Turn-Off Delay Time	$td_{(off)}$			78	-	
Turn-Off Fall Time	tf		-	45	-	
Drain-Source Diode						
Maximum Continuous Drain-Source Diode Forward Current	I_S	---	-	-	-0.5	A
Diode Forward Voltage	V_{SD}	I_S=-1A, V_{GS}=0V		-0.8	-1.2	V

NOTES :

1. Pulse width≤300us, Duty cycle≤2%
2. Essentially independent of operating temperature typical characteristics.
3. $R_{\Theta JA}$ is the sum of the junction-to-case and case-to-ambient thermal resistance where the case thermal reference is defined as the solder mounting surface of the drain pins mounted on a 1 inch FR-4 with 2oz. square pad of copper.
4. The maximum current rating is package limited.

PJC7407

TYPICAL CHARACTERISTIC CURVES

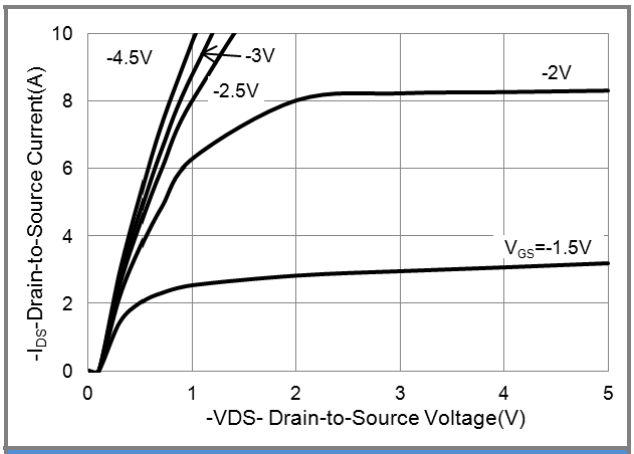


Fig.1 On-Region Characteristics

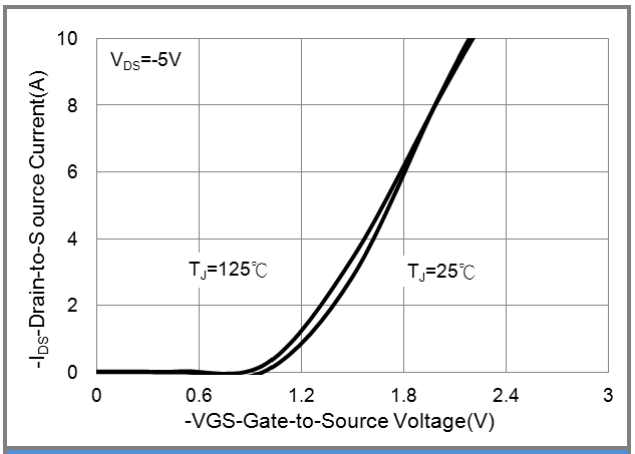


Fig.2 Transfer Characteristics

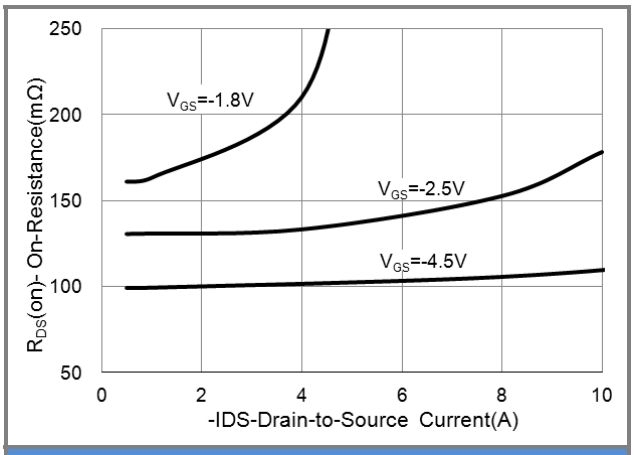


Fig.3 On-Resistance vs. Drain Current

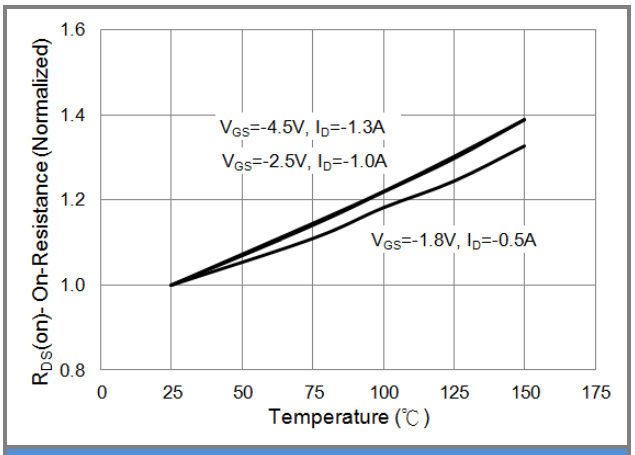


Fig.4 On-Resistance vs. Junction temperature

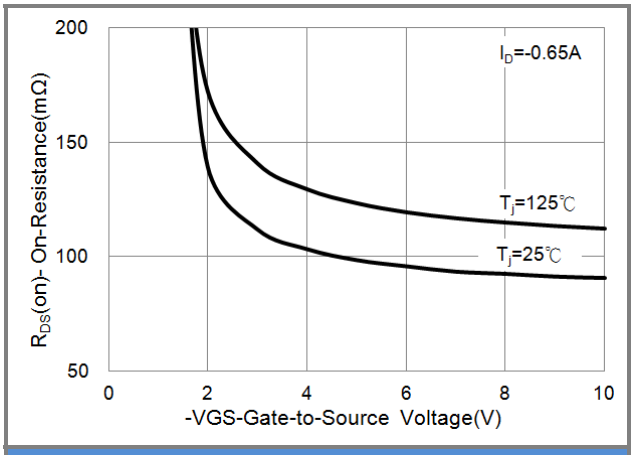


Fig.5 On-Resistance Variation with VGS.

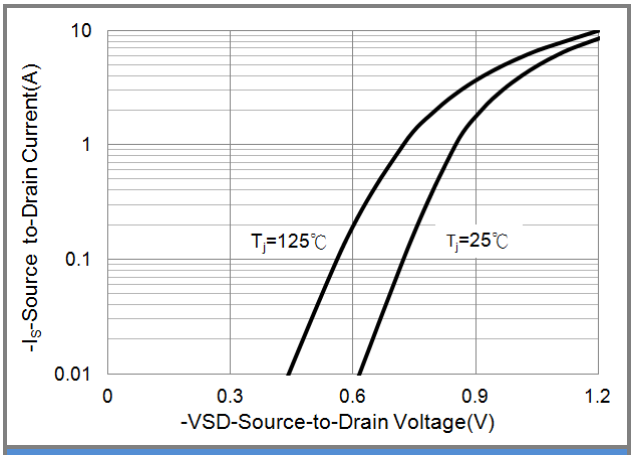


Fig.6 Body Dlode CharacterIsIcs

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TYPICAL CHARACTERISTIC CURVES

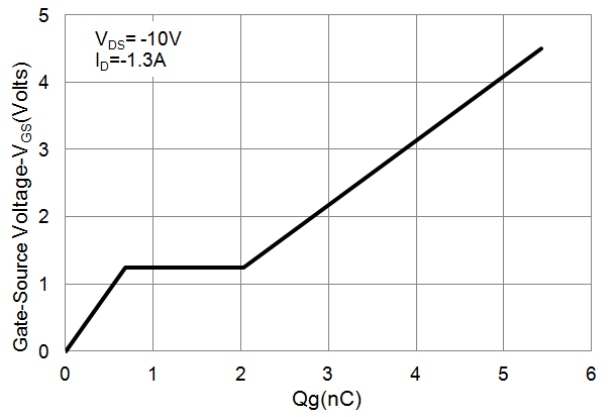


Fig.7 Gate-Charge Characteristics

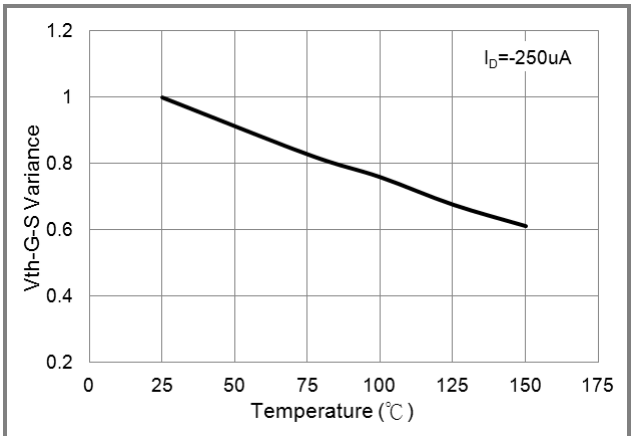


Fig.8 Threshold Voltage Variation with Temperature.

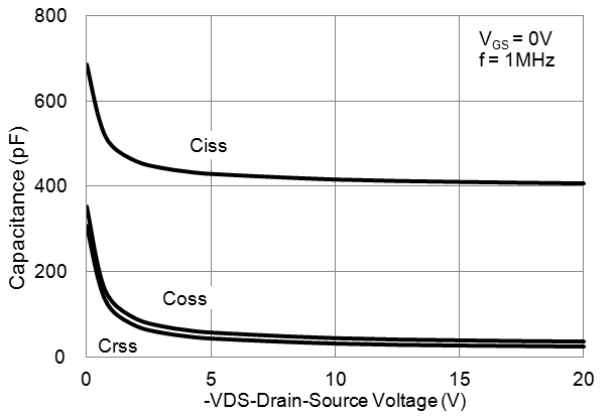


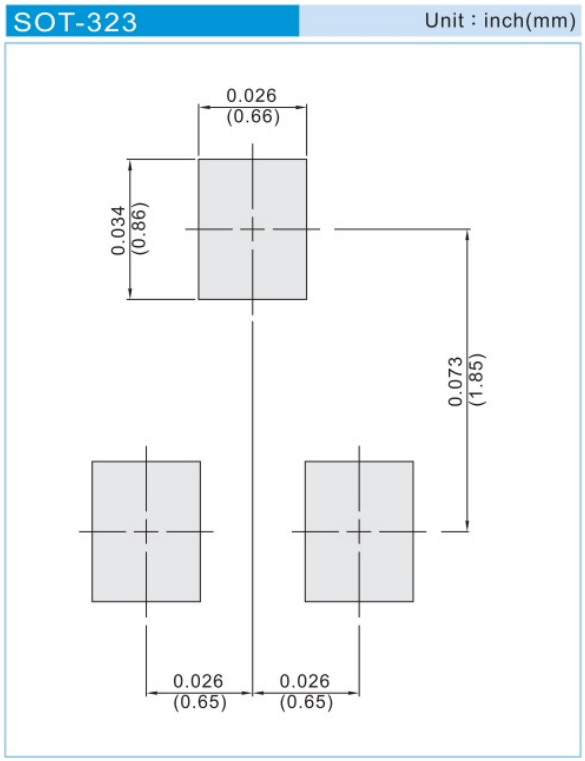
Fig.9 Threshold Voltage Variation with Temperature.

PJC7407

PART NO PACKING CODE VERSION

Part No Packing Code	Package Type	Packing type	Marking	Version
PJC7407_R1_00001	SOT-323	3K pcs / 7” reel	C07	Halogen free
PJC7407_R2_00001	SOT-323	12K pcs / 13” reel	C07	Halogen free

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PJC7407

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