



PJA63P02

20V P-CHANNEL ENHANCEMENT MODE MOSFET

VOLTAGE 20 Volts **CURRENT** 2.9 Amperes

SOT-23 Unit : inch(mm)

FEATURES

- $R_{DS(ON)}$, $V_{GS}@-1.8V, I_D@-2.3A < 108\text{ m}\Omega$
- $R_{DS(ON)}$, $V_{GS}@-4.5V, I_D@-3.3A < 63\text{ m}\Omega$
- Advanced Trench Process Technology
- High Density Cell Design For Ultra Low On-Resistance
- Specially Designed for DC/DC Converters
- Low Gate Charge
- Lead free in comply with EU RoHS 2002/95/EC directives.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case: SOT-23 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Apporx. Weight : 0.0003 ounces, 0.0084grams
- Marking : 63

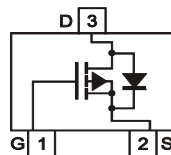
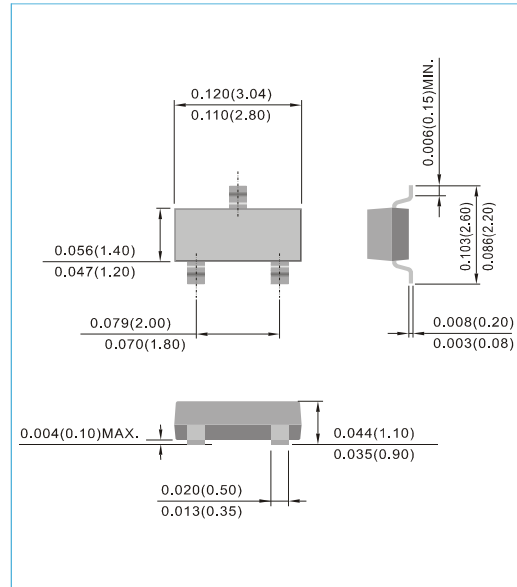


Fig.80 (TOP VIEW)

MAXIMUM RATINGS AND THERMAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER		SYMBOL	LIMIT	UNITS
Drain-Source Voltage		V_{DS}	-20	V
Gate-Source Voltage		V_{GS}	± 12	V
Continuous Drain Current	Steady-State $T_A=25^\circ\text{C}$	I_D	-2.9	A
Pulsed Drain Current		I_{DM}	-12	A
Power Dissipation (Notes 1)	Steady-State $T_A=25^\circ\text{C}$	P_D	0.8	W
Typical Thermal Resistance (Notes 1)		$R_{\theta JA}$	155	$^\circ\text{C}/\text{W}$
Operating Junction and Storage Temperature Range		T_J, T_{STG}	-55 to + 150	$^\circ\text{C}$

NOTES:

1. Mounted on 7.5cm² FR-4 PCB .



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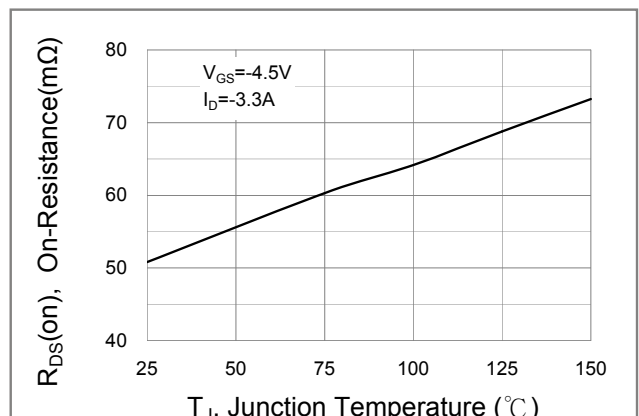
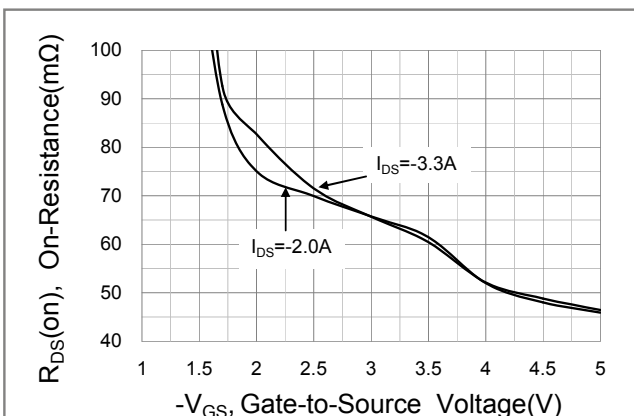
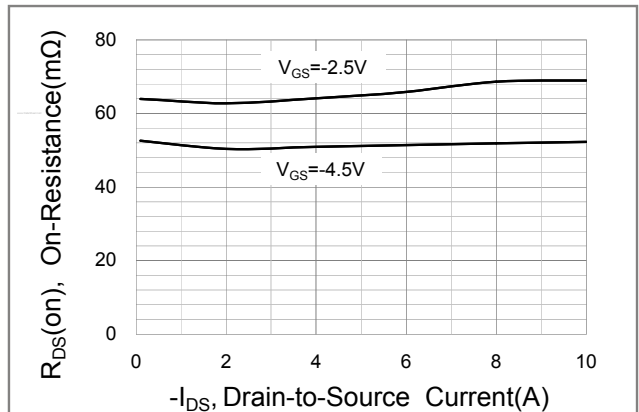
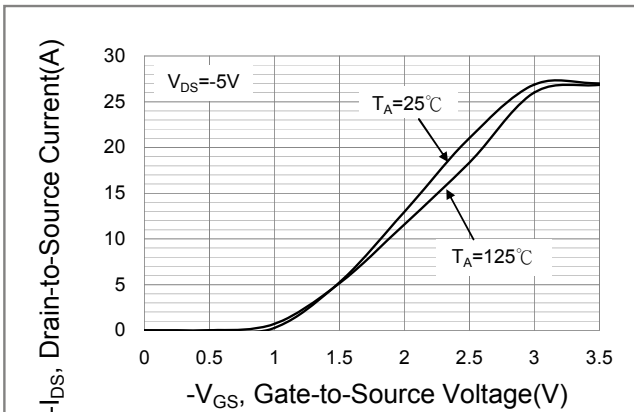
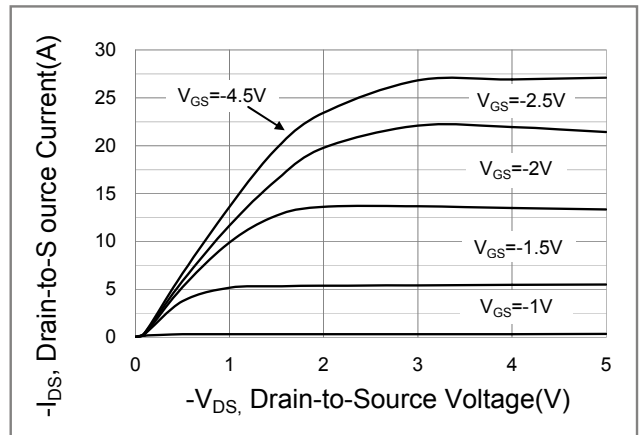
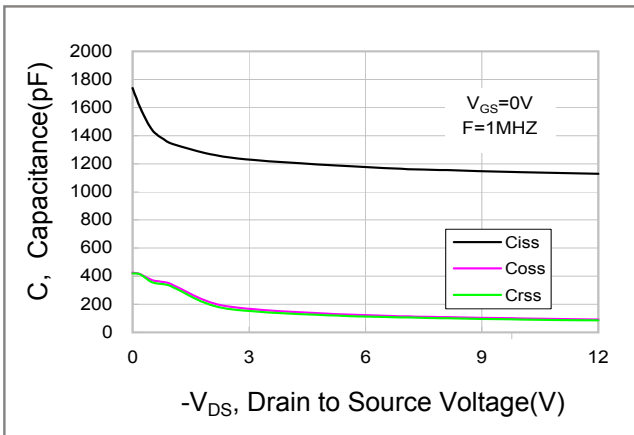
ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Static						
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_D=-250\mu A$	-20	-	-	V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	-0.45	-0.61	-1.0	V
Drain-Source On-State Resistance	$R_{DS(on)}$	$V_{GS} = -4.5V, I_D = -3.3A$	-	50	63	m Ω
		$V_{GS} = -2.5V, I_D = -2.8A$	-	62	80	
		$V_{GS} = -1.8V, I_D = -2.3A$	-	79	108	
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -16V, V_{GS}=0V$	-	-	-1	μA
Gate -Source Leakage Current	I_{GSS}	$V_{GS} = \pm 8V, V_{DS}=0V$	-	-	± 100	nA
Diode Forward Voltage	V_{SD}	$I_S = -1A, V_{GS}=0V$	-	-0.78	-1	V
Dynamic						
Total Gate Charge	Q_g	$V_{DS} = -10V, I_D = -2.7A$ $V_{GS} = -4.5V$	-	12.7	-	nC
Gate-Source Charge	Q_{gs}		-	1.5	-	
Gate-Drain Charge	Q_{gd}		-	2.98	-	
Turn-On Delay Time	td_{on}	$V_{DS} = -10V, V_{GS} = -4.5V,$ $R_G = 6\Omega, R_L = 3\Omega$	-	16.2	-	ns
Turn-Off Delay Time	td_{off}		-	66.4	-	
Turn-On Rise Time	t_r		-	20.2	-	
Turn-Off Fall Time	t_f		-	17.2	-	
Input Capacitance	C_{iss}	$V_{DS} = -10V, V_{GS} = 0V$ $f = 1.0MHz$	-	1141	-	pF
Output Capacitance	C_{oss}		-	99	-	
Reverse Transfer Capacitance	C_{rss}		-	92	-	



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RATING AND CHARACTERISTIC CURVES





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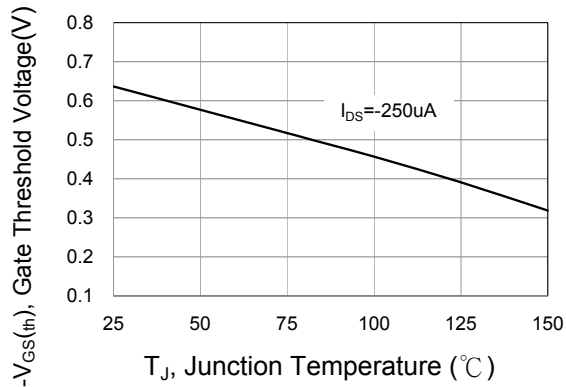


Fig.7 Gate Threshold Voltage VS Junction Temperature

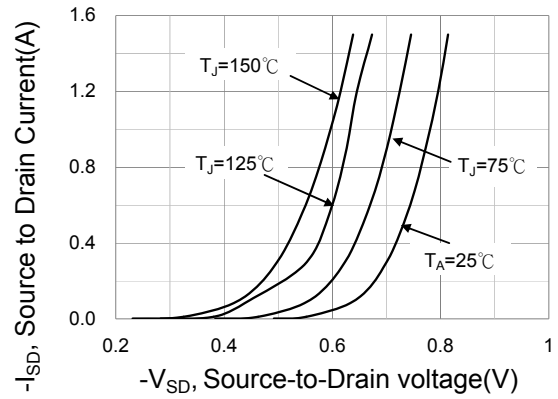
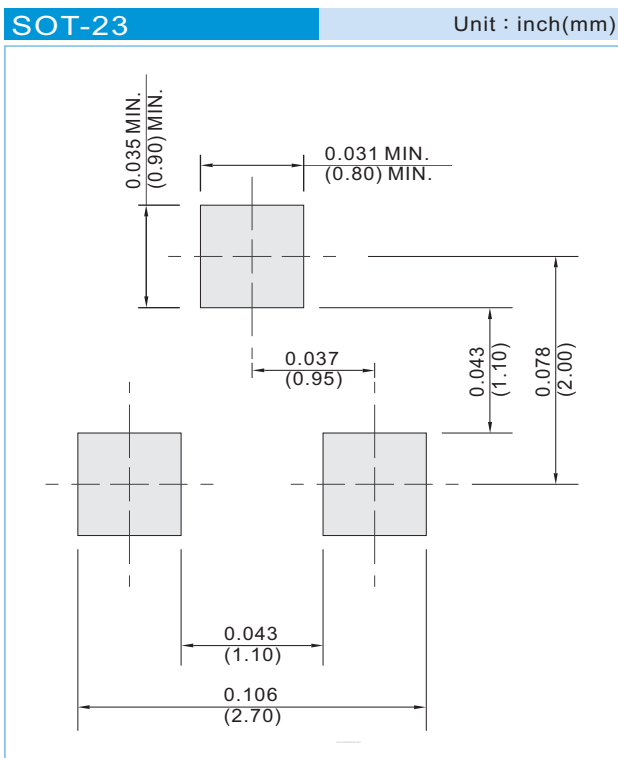


Fig.8 Source-Drain Current VS Source-Drain Voltage



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MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
 - T/R - 12K per 13" plastic Reel
 - T/R - 3K per 7" plastic Reel

LEGAL STATEMENT

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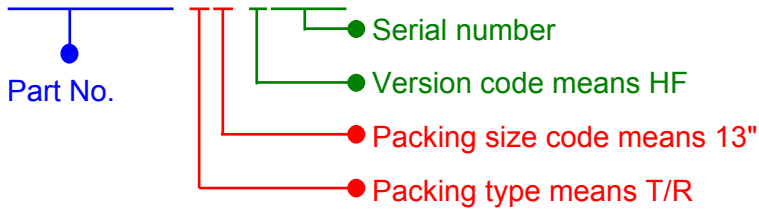
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For example :

RB500V-40_R2_0000%



Part No_packing code_Version

D>5 *' D\$&SF %\$\$\$\$%

D>5 *' D\$&SF &\$\$\$\$%

Packing Code XX				Version Code XXXXX		
Packing type	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd ~5 th Code
T/B	A	N/A	0	HF	0	serial number
T/R	R	7"	1	RoHS	1	serial number
B/P	B	13"	2			
T/P	T	26mm	X			
TRR	S	52mm	Y			
TRL	L	PBCU	U			
FORMING	F	PBCD	D			