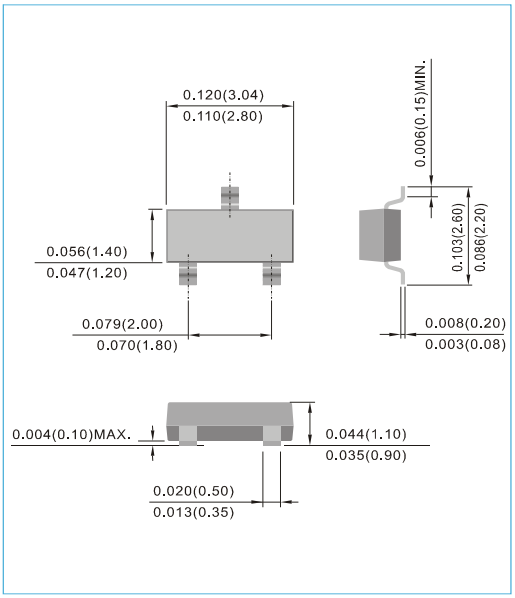
PJA63P02

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 mΩ
- $R_{DS(ON)}$, V_{GS}@-4.5V,I_D@-3.3A<63 mΩ
- 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

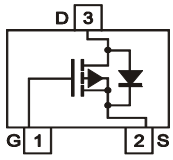


Fig.80 (TOP VIEW)

MAXIMUM RATINGS AND THERMAL CHARACTERISTICS (T_A=25°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°C	I_D	-2.9	A
Pulsed Drain Current			I_{DM}	-12	A
Power Dissipation (Notes 1)	Steady-State	T_A=25°C	P_D	0.8	W
Typical Thermal Resistance (Notes 1)			$R_{\theta JA}$	155	°C/W
Operating Junction and Storage Temperature Range			T_J,T_{STG}	-55 to + 150	°C

NOTES:

1. Mounted on 7.5cm^2 FR-4 PCB .

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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=-250μA	-20	-	-	V
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=-250μA	-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	mΩ
		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}= ±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= 6Ω , R_L= 3Ω	-	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=1.0MH_Z	-	1141	-	pF
Output Capacitance	C_{oss}		-	99	-	
Reverse Transfer Capacitance	C_{rss}		-	92	-	

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RATING AND CHARACTERISTIC CURVES

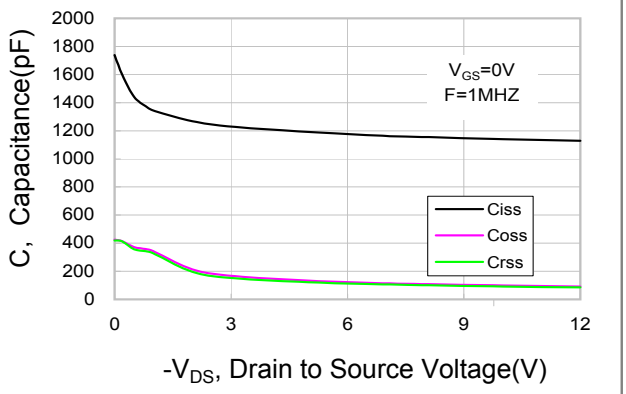

Fig.1 Capacitance Variation

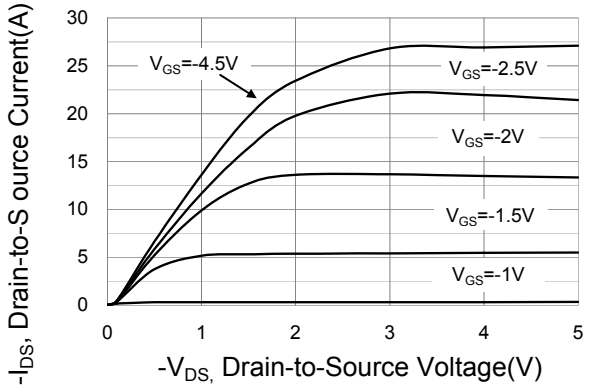

Fig.2 Drain-Source Current VS Drain-Source Voltage

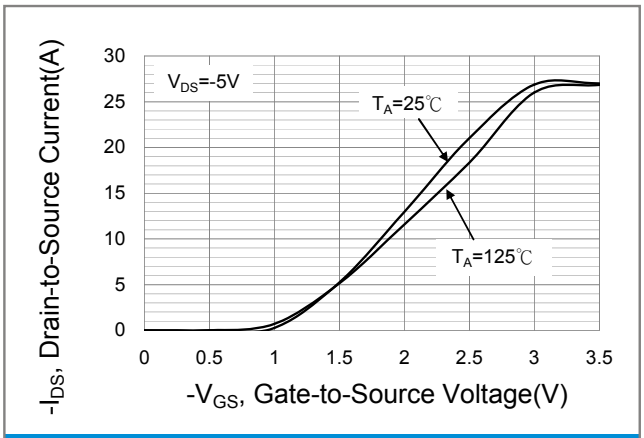

Fig.3 Drain-Source Current VS Gate-Source Voltage

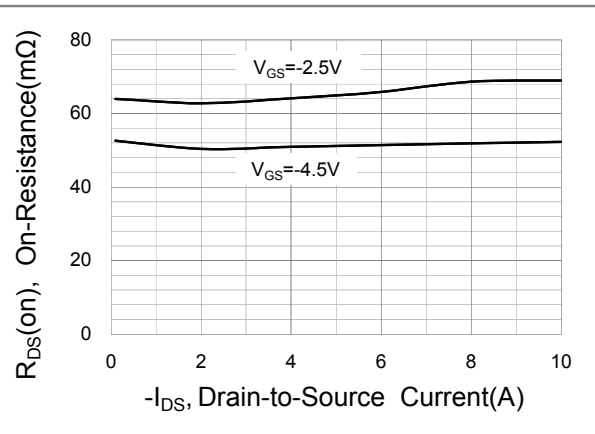

Fig.4 On-Resistsnce VS Drain-Source current

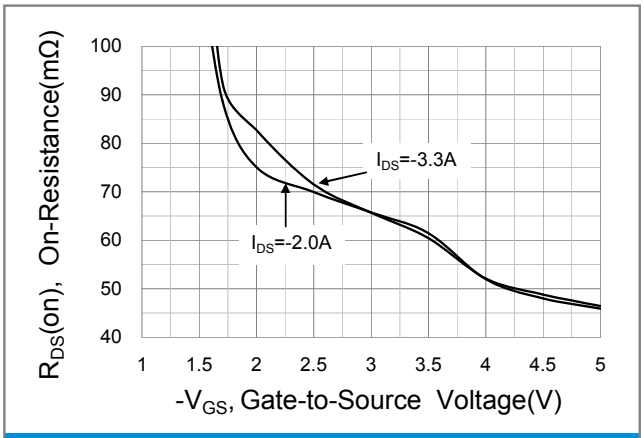

Fig.5 On-Resistsnce VS Gate-Source Voltage

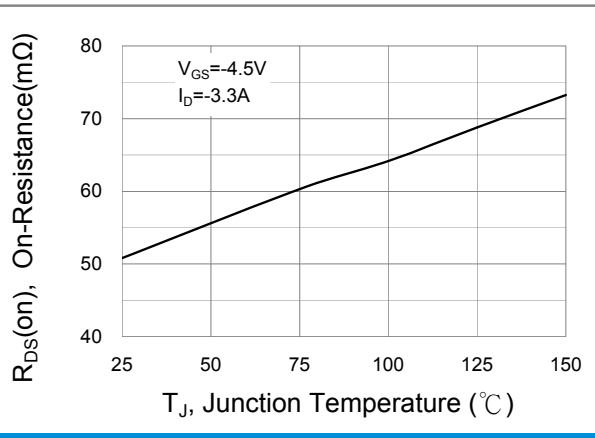

Fig.6 On-Resistsnce VS Junction Temperature

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RATING AND CHARACTERISTIC CURVES

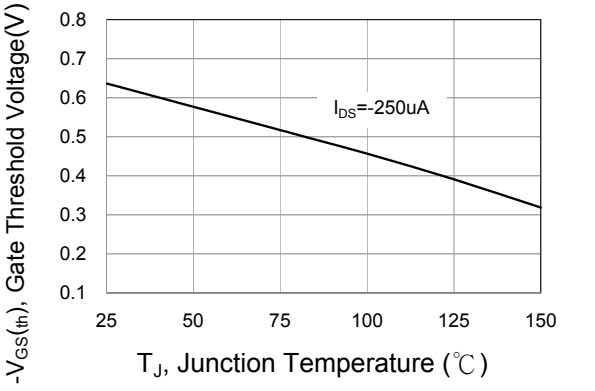

Fig.7 Gate Threshold Voltage VS Junction Temperature

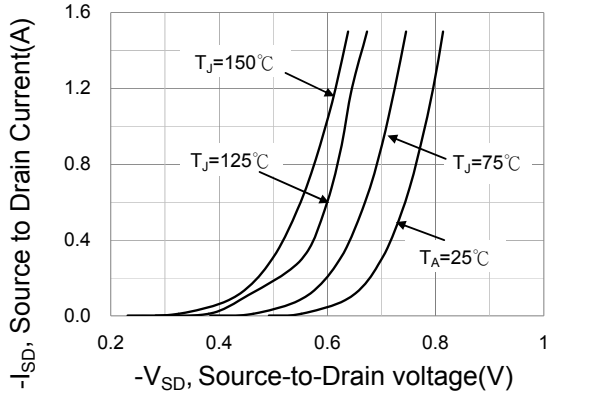

Fig.8 Source-Drain Current VS Source-Drain Voltage

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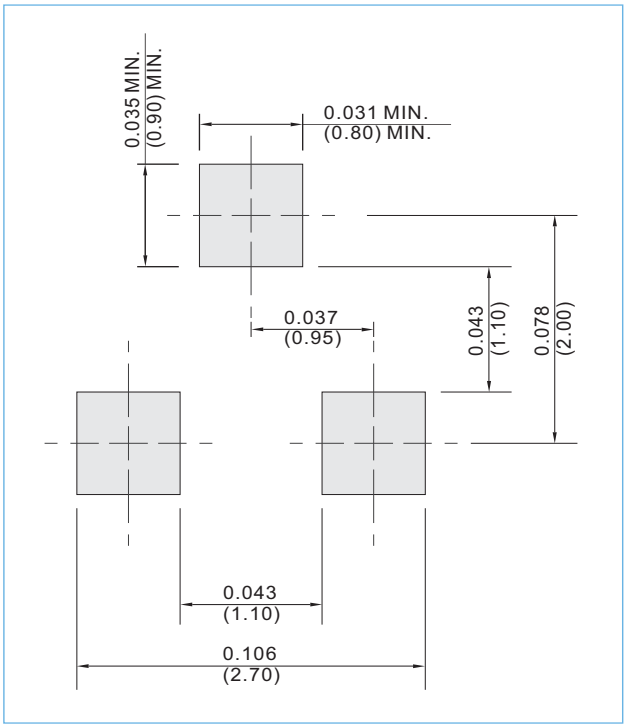
MOUNTING PAD LAYOUT

SOT-23 Unit : inch(mm)



ORDER INFORMATION

- Packing information

  T/R - 12K per 13" plastic Reel

  T/R - 3K per 7” plastic Reel

LEGAL STATEMENT

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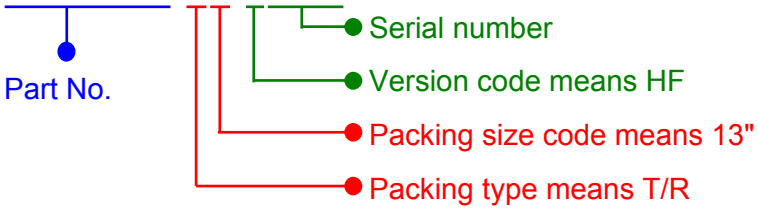
For example :

RB500V-40_R2_00001



Part No_packing code_Version

PJA63P02_R1_00001
PJA63P02_R2_00001

Packing Code XX				Version Code XXXXX		
Packing type	1st Code	Packing size code	2nd Code	HF or RoHS	1st Code	2nd~5th 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			