

PJA63P02

20V P-CHANNEL ENHANCEMENT MODE MOSFET

VOLTAGE	20 Volts	CURRENT	2.9 Amperes
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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

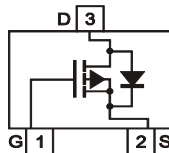
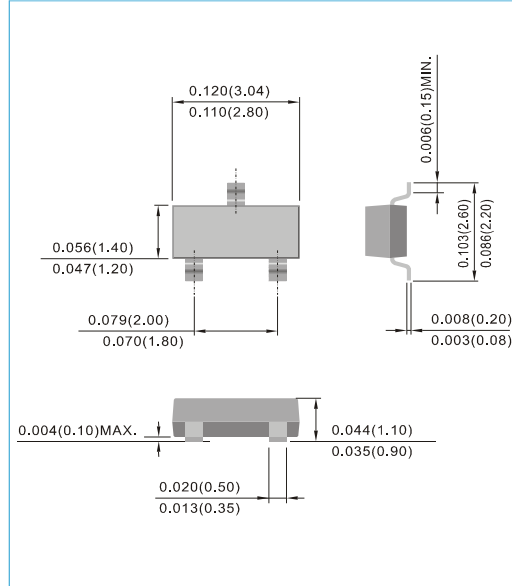


Fig.80 (TOP VIEW)

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 .

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	-	