

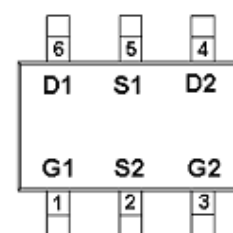
➤ General Description

This PAP3081C P-Channel enhancement mode power field effect transistor is the high density trench technology and this advanced technology can provide excellent $R_{ds(On)}$ performance and efficiency for power switching and load switching application., this device also comply with the RoHS and Green Product requirement with full function reliability approved.

➤ Feature

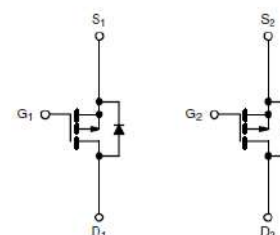
- Super high density cell design for extremely low $R_{DS(ON)}$
- Exceptional on-resistance and maximum DC current capability
- TSOP-6 package design

➤ TSOP-6



➤ Application

- Load Switch
- PA Switch
- Battery Switch



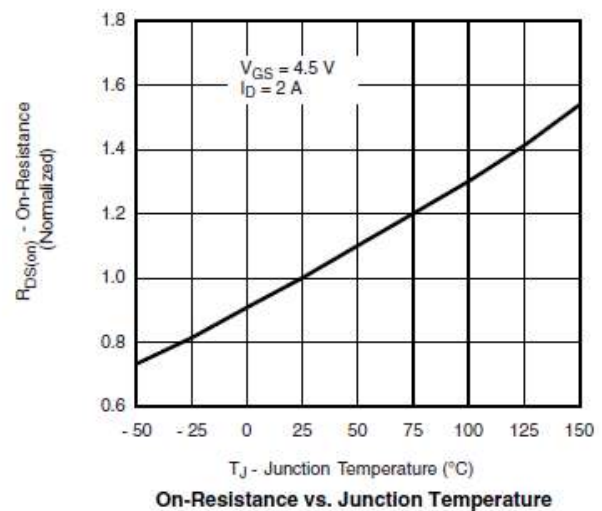
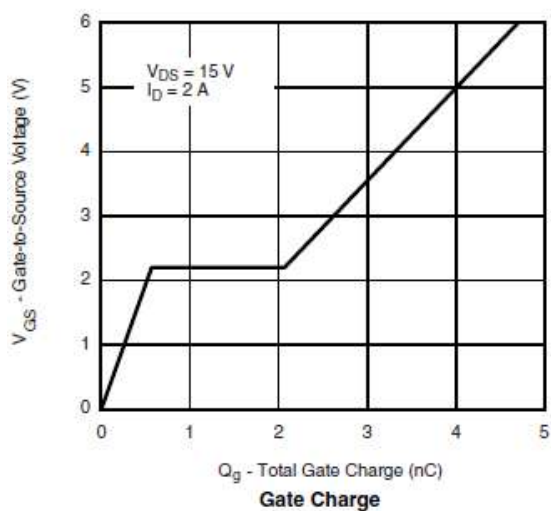
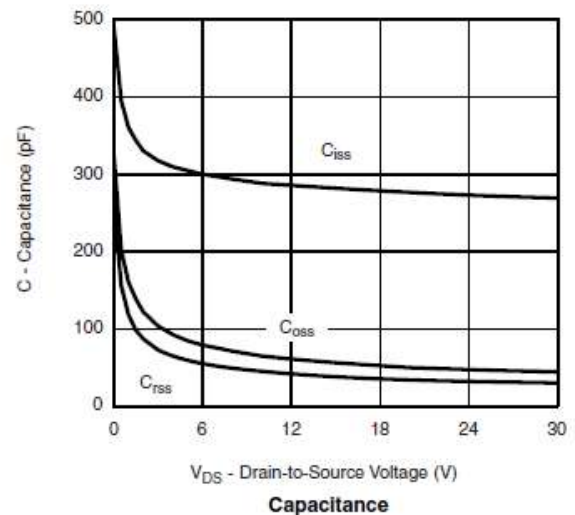
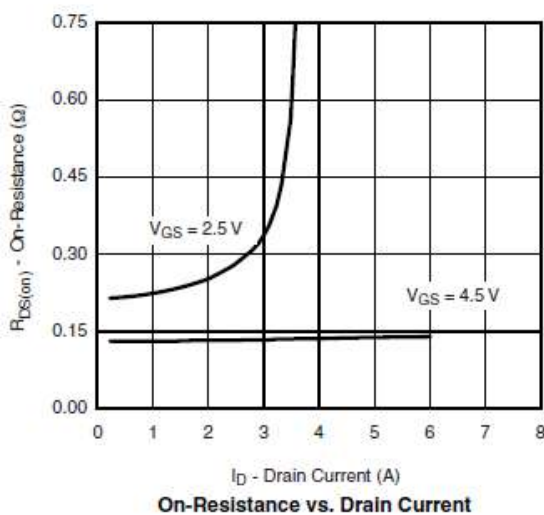
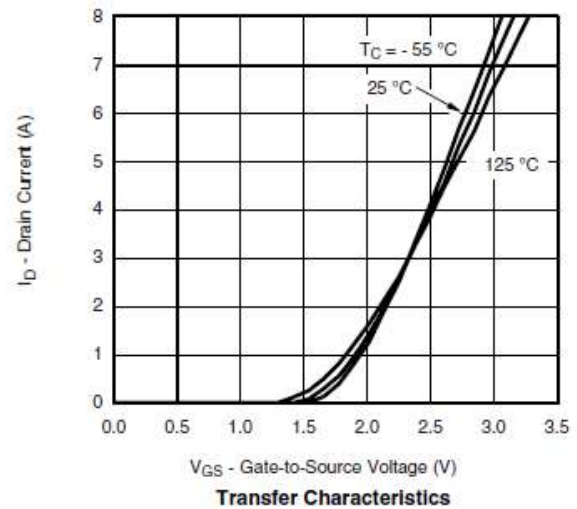
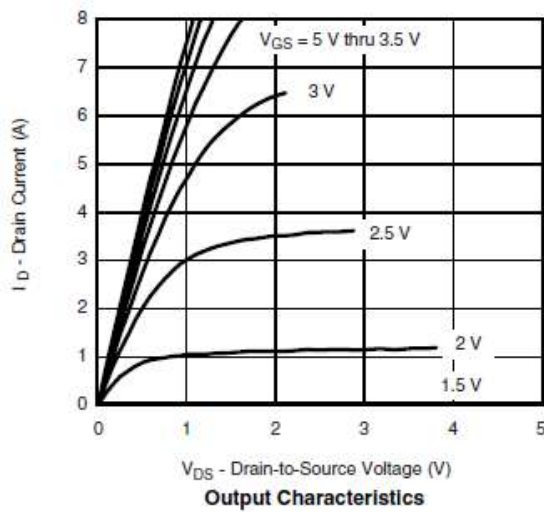
➤ Absolute Maximum Ratings

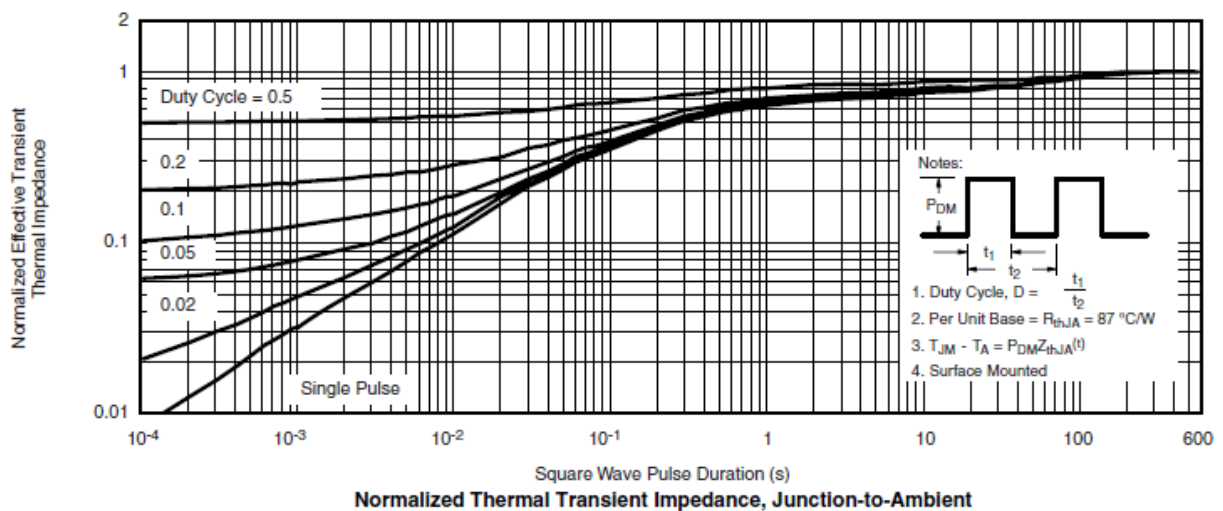
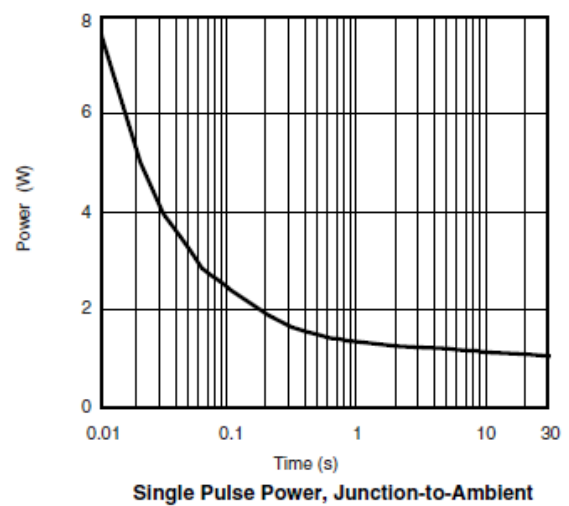
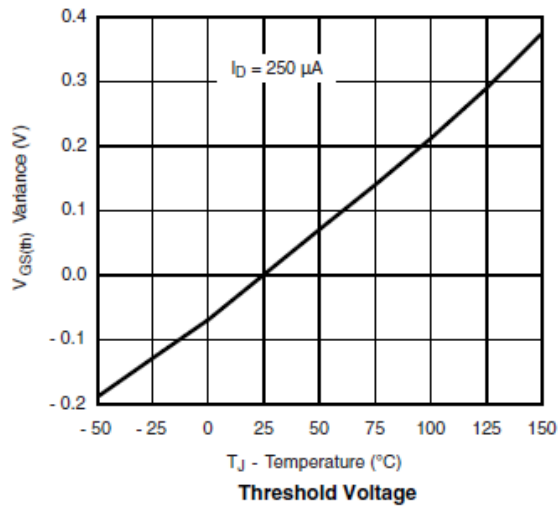
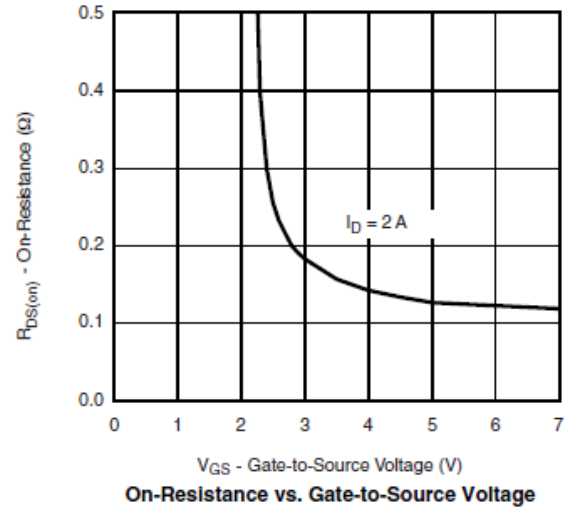
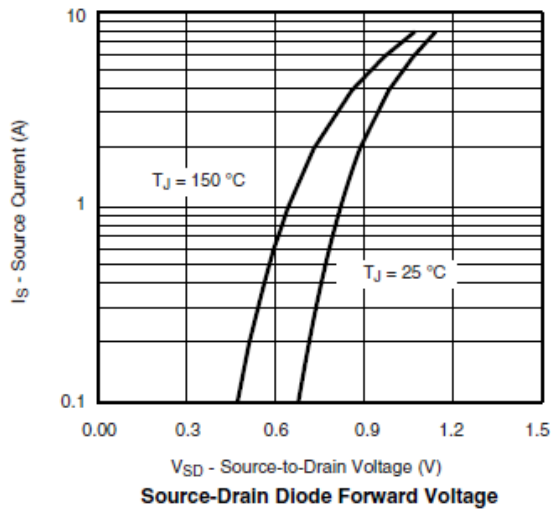
Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DSS}	-30	V
Gate –Source Voltage	V_{GSS}	± 12	V
Continuous Drain Current($T_J=150^{\circ}C$)	I_D	$T_A=25^{\circ}C$ -3.8	A
		$T_A=70^{\circ}C$ -1.8	
Pulsed Drain Current	I_{DM}	-20	A
Continuous Source Current(Diode Conduction)	I_S	-1.7	A
Power Dissipation	P_D	$T_A=25^{\circ}C$ 2.0	W
		$T_A=70^{\circ}C$ 1.3	
Operating Junction Temperature	T_J	150	$^{\circ}C$
Storage Temperature Range	T_{STG}	-55/150	$^{\circ}C$
Thermal Resistance-Junction to Ambient	$R_{\theta JA}$	120	$^{\circ}C/W$

➤ Electrical Characteristics ($T_A=25^\circ C$ Unless otherwise noted)

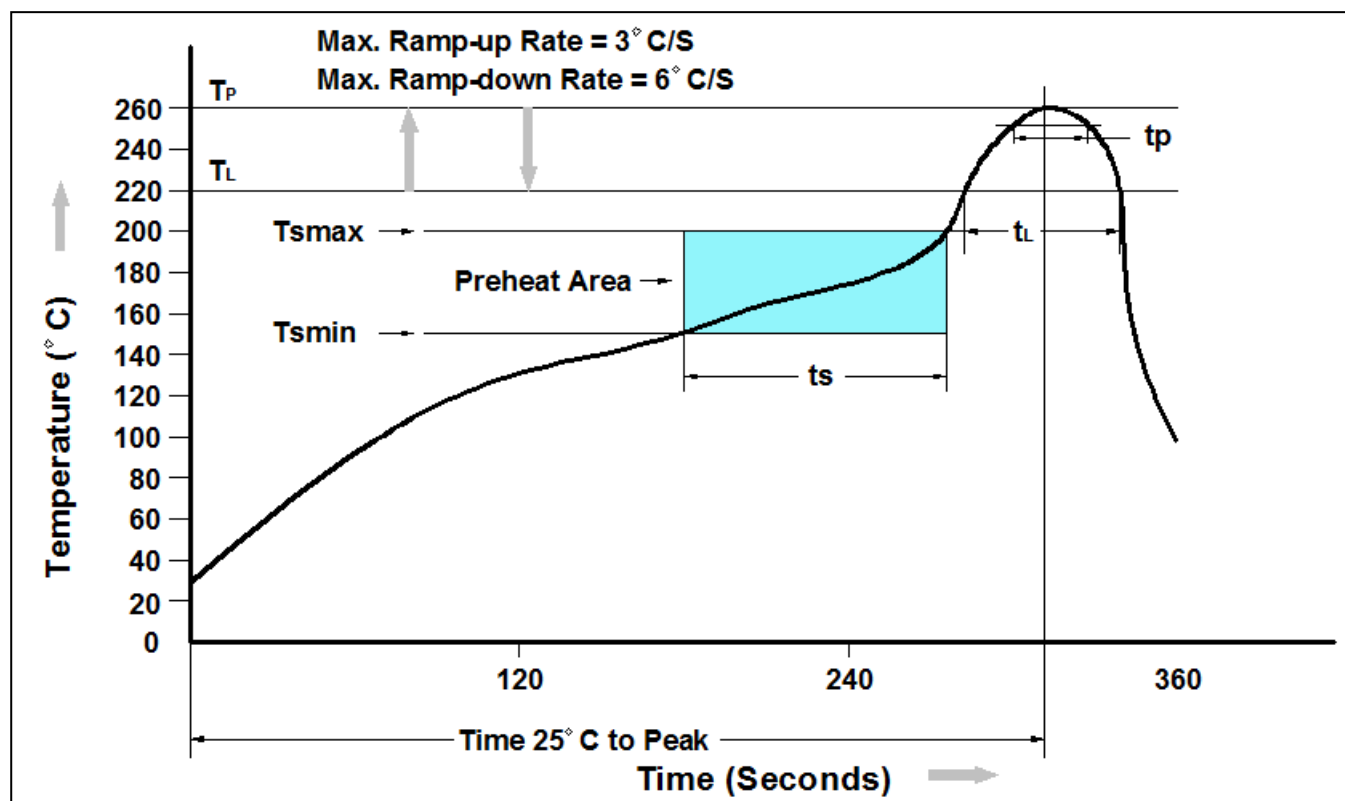
Parameter	Symbol	Conditions	Min.	Typ	Max.	Unit
Static						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=-250\mu A$	-30			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	-0.6		-1.4	
Gate Leakage Current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 12V$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-24V, V_{GS}=0V$			-1	uA
		$V_{DS}=-24V, V_{GS}=0V$ $T_A=85^\circ C$			-30	
On-State Drain Current	$I_{D(on)}$	$V_{DS} \leq -5V, V_{GS}=-10V$	-10			A
Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=-10V, I_D=-3.8A$		104	135	m Ω
		$V_{GS}=-4.5V, I_D=-2.8A$		132	175	
		$V_{GS}=-2.5V, I_D=-1.8A$		190	245	
Forward Transconductance	g_{FS}	$V_{DS}=-5V, I_D=-4.0A$		10		S
Diode Forward Voltage	V_{SD}	$I_S=-1.7A, V_{GS}=0V$		-0.7	-1.3	V
Dynamic						
Total Gate Charge	Q_g	$V_{DS}=-15V, V_{GS}=-4.5V$ $I_D \equiv -2.0A$		4	6	nC
Gate-Source Charge	Q_{gs}			0.6		
Gate-Drain Charge	Q_{gd}			1.5		
Input Capacitance	C_{iss}	$V_{DS}=-15V, V_{GS}=0V$ $f=1MHz$		230		pF
Output Capacitance	C_{oss}			40		
Reverse Transfer Capacitance	C_{rss}			25		
Turn-On Time	$t_{d(on)}$	$V_{DD}=-15V, R_L=15\Omega$ $I_D \equiv -1.0A, V_{GEN}=-10V$ $R_G=6\Omega$		5	10	ns
	t_r			8	15	
Turn-Off Time	$t_{d(off)}$			15	30	
	t_f			15	30	

➤ Typical Characteristics





➤ Recommend IR Reflow Soldering Thermal Profile

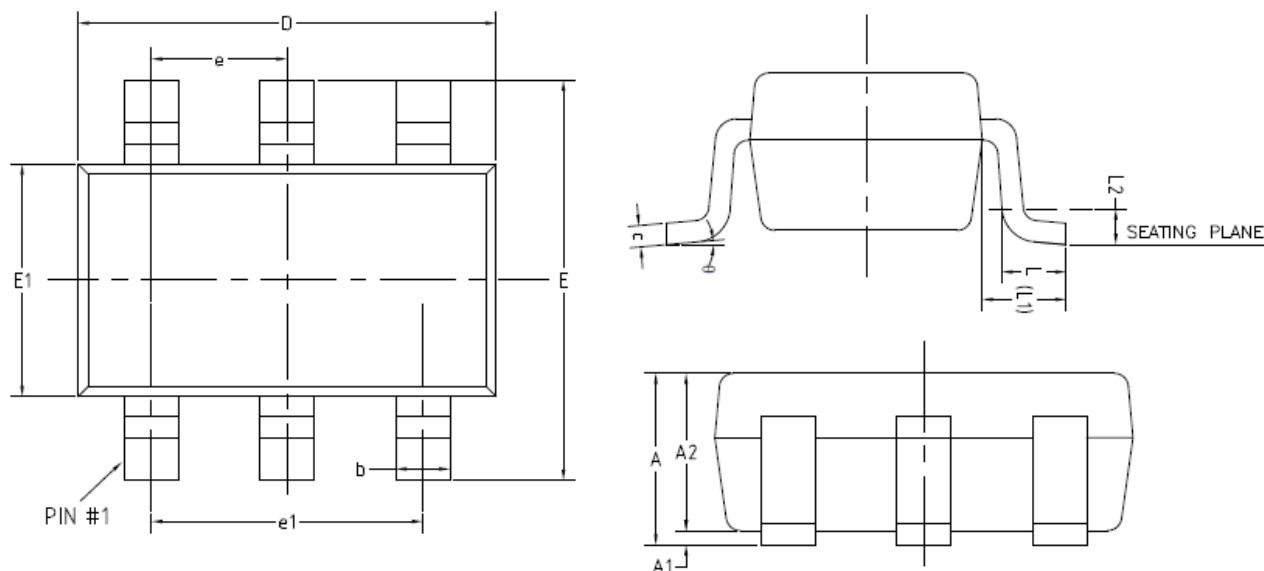


Profile Feature	Pb-Free Assembly Profile
Temperature Min. (T _{min})	150°C
Temperature Max. (T _{max})	200°C
Time (t _s) from (T _{min} to T _{max})	60-120 seconds
Average Ramp-up Rate (t _L to t _P)	3°C/second max.
Liquidous Temperature (T _L)	217°C
Time (t _L) Maintained Above (T _L)	60 – 150 seconds
Peak Temperature	260°C +0°C / -5°C
Time (t _P) within 5°C of actual Peak Temperature	30 seconds
Ramp-down Rate (T _P to T _L)	6°C/second max
Time 25°C to Peak Temperature	8 minutes max.

➤ Ordering Information

Part Number	Description	Quantity
PAP3081C	TSOP-6 Reel	3000 pcs

➤ Package Information (TSOP-6)



COMMON DIMENSIONS
(UNITS OF MEASURE=MILLIMETER)

SYMBOL	MIN	NOM	MAX
A	0.70	—	0.90
A1	0	—	0.10
A2	0.70	0.75	0.80
b	0.35	—	0.50
c	0.08	—	0.20
D	2.82	2.92	3.02
E	2.65	2.80	2.95
E1	1.60	1.65	1.70
e	0.95(BSC)		
e1	1.90(BSC)		
L	0.30	0.45	0.60
L1	0.59REF		
L2	0.25BSC		
θ	0°	—	8°

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