



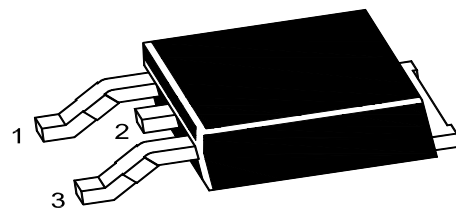
PJM08P40TE

P-Channel Enhancement Mode Power MOSFET

Features

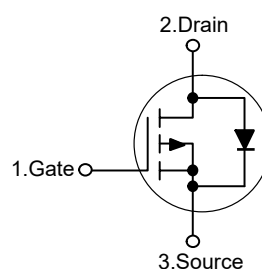
- Excellent package for good heat dissipation
- High density cell design for low $R_{DS(on)}$
- $V_{DS} = -40V, I_D = -8A$
 $R_{DS(on)} < 40m\Omega @ V_{GS} = -10V$

TO-252



1. Gate 2.Drain 3.Source

Schematic Diagram



Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter		Symbol	Value	Unit
Drain-Source Voltage		$-V_{DS}$	40	V
Gate-Source Voltage		V_{GS}	± 20	V
Drain Current-Continuous	$T_C = 25^\circ C$ Note1	$-I_D$	8	A
	$T_A = 25^\circ C$ Note2		6	
Drain Current-Pulsed Note1		$-I_{DM}$	60	A
Maximum Power Dissipation	$T_C = 25^\circ C$	P_D	24	W
	$T_A = 25^\circ C$ Note2		2.4	
Junction Temperature		T_J	150	$^\circ C$
Storage Temperature Range		T_{STG}	-55 to +150	$^\circ C$

Thermal Characteristics

Thermal Resistance, Junction-to-Ambient Note2	$R_{\theta JA}$	43	$^\circ C/W$
Maximum Junction-to-Case	$R_{\theta JC}$	4.3	$^\circ C/W$



PJM08P40TE

P-Channel Enhancement Mode Power MOSFET

Electrical Characteristics

(Ta=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	$-V_{(BR)DSS}$	$V_{GS}=0V, I_D=-250\mu A$	40	--	--	V
Zero Gate Voltage Drain Current	$-I_{DSS}$	$V_{DS}=-40V, V_{GS}=0V$	--	--	1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0V$	--	--	± 100	nA
Gate Threshold Voltage ^{Note3}	$-V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	1.4	--	2.7	V
Drain-Source On-Resistance ^{Note3}	$R_{DS(on)}$	$V_{GS}=-10V, I_D=-5A$	--	30	40	m Ω
		$V_{GS}=-4.5V, I_D=-4A$	--	36	50	m Ω
Forward Transconductance ^{Note3}	g_{FS}	$V_{DS}=-15V, I_D=-5A$	--	20	--	S
Dynamic Characteristics						
Input Capacitance	C_{iss}	$V_{DS}=-10V, V_{GS}=0V, f=1MHz$	--	1555	--	pF
Output Capacitance	C_{oss}		--	176	--	pF
Reverse Transfer Capacitance	C_{rss}		--	142	--	pF
Switching Characteristics						
Turn-on Delay Time	$t_{d(on)}$	$V_{DD}=-20V, I_D \approx -5A, R_L=4\Omega$ $V_{GEN}=-4.5V, R_G=1\Omega$	--	47	80	nS
Turn-on Rise Time	t_r		--	60	110	nS
Turn-off Delay Time	$t_{d(off)}$		--	35	60	nS
Turn-off Fall Time	t_f		--	13	25	nS
Total Gate Charge	Q_g	$V_{DS}=-20V, I_D=-5A, V_{GS}=-4.5V$	--	17	27	nC
Gate-Source Charge	Q_{gs}		--	4.2	--	nC
Gate-Drain Charge	Q_{gd}		--	7	--	nC
Source-Drain Diode Characteristics						
Diode Forward Voltage	$-V_{SD}$	$V_{GS}=0V, I_S=-2A$	--	0.76	1.2	V
Diode Forward Current	$-I_S$	$T_C=25^\circ C$	--	--	8	A

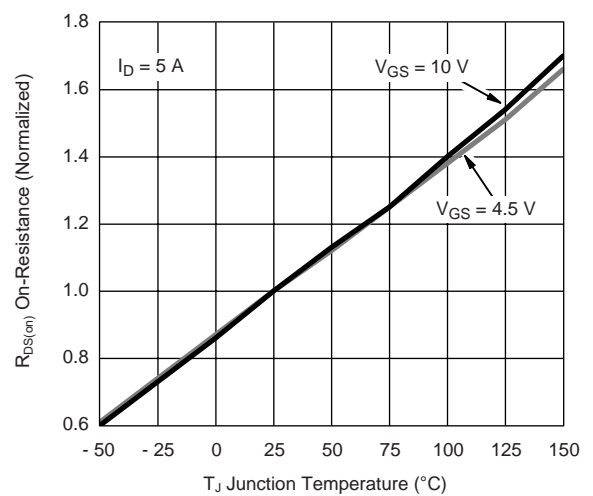
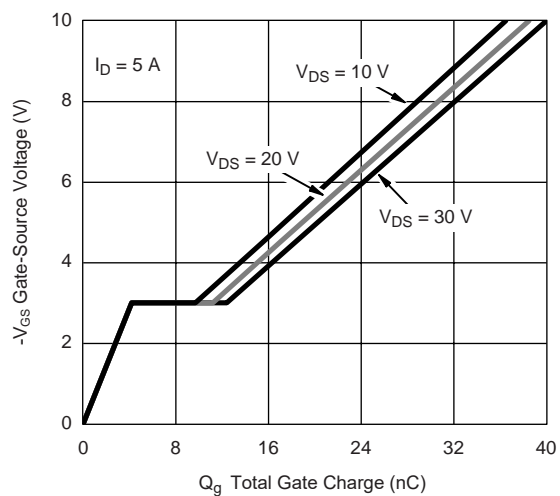
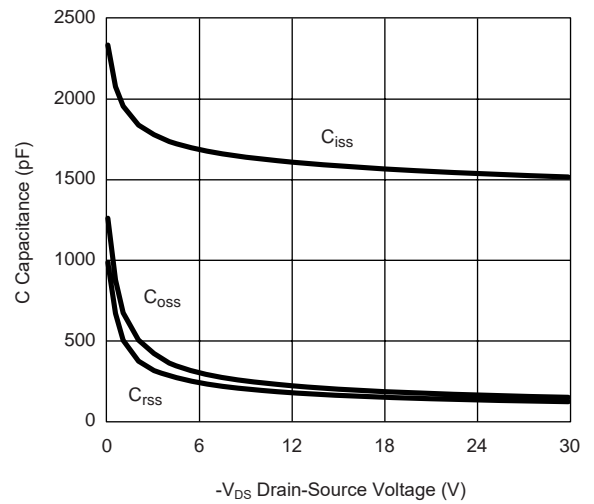
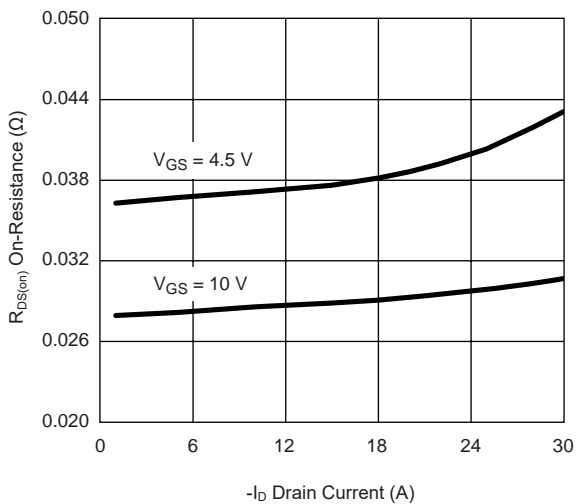
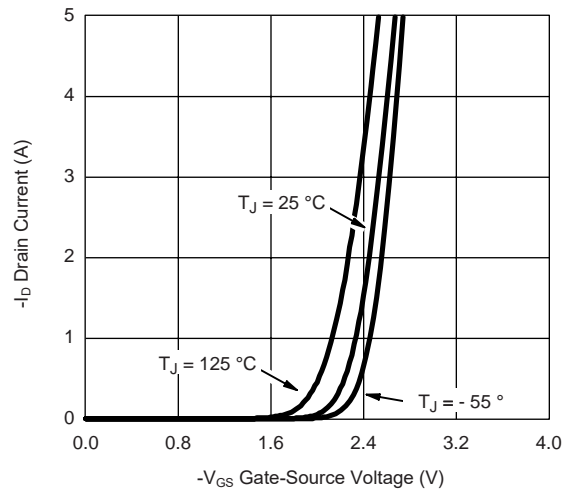
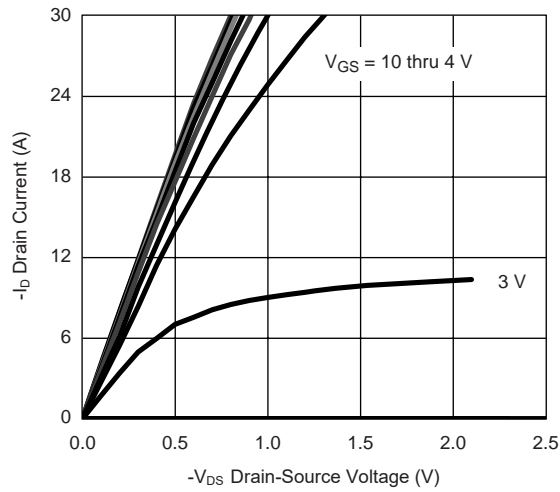
- Note: 1. Package limited.
 2. Surface mounted on "1 X 1" FR4 board.
 3. Pulse Test: Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.



PJM08P40TE

P-Channel Enhancement Mode Power MOSFET

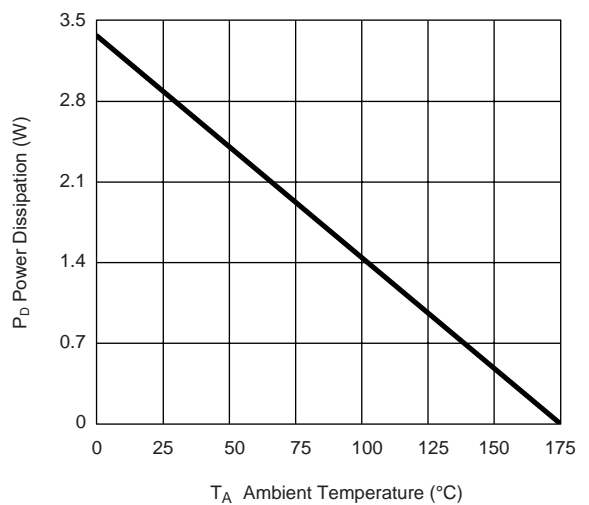
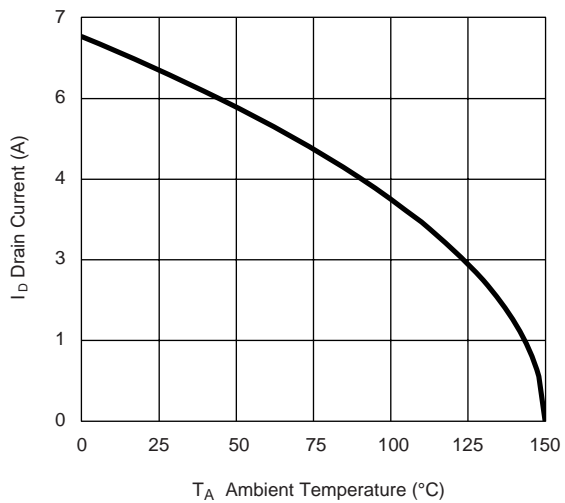
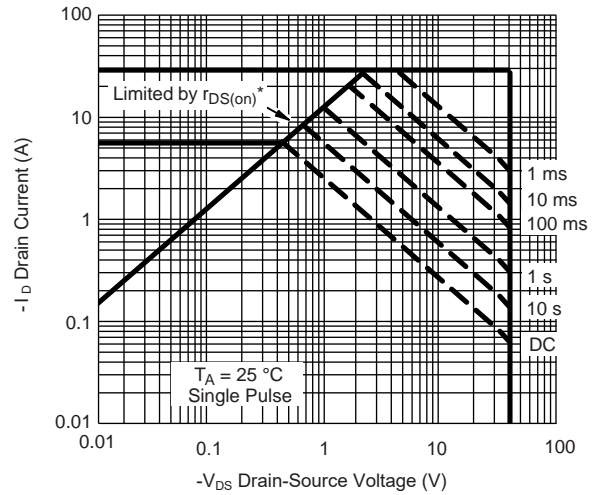
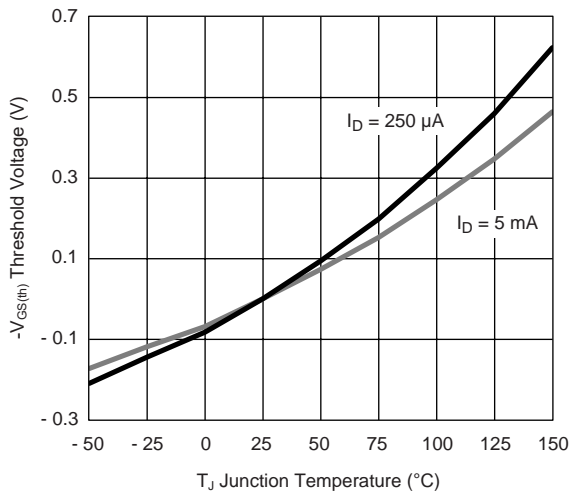
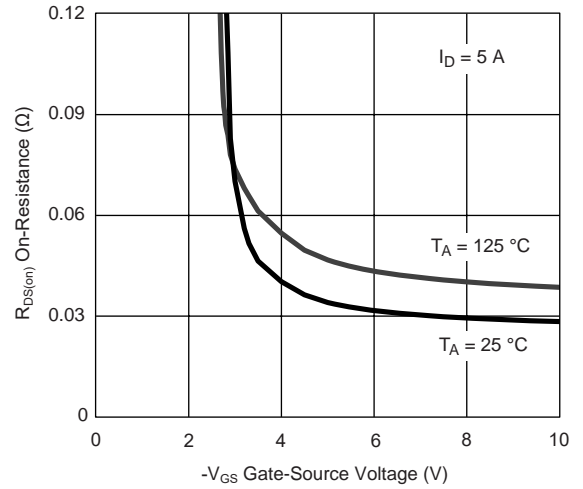
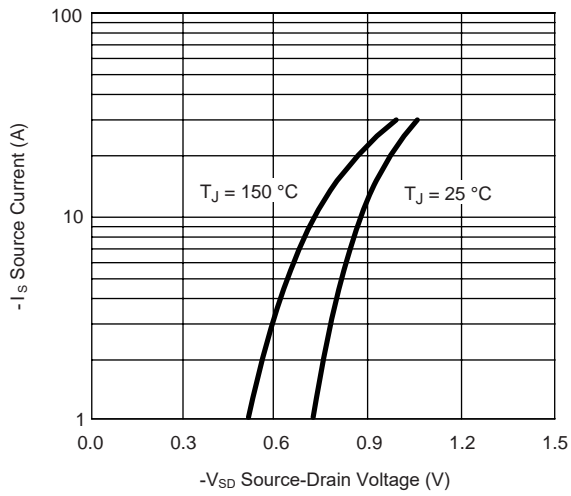
Typical Characteristic Curves





PJM08P40TE

P-Channel Enhancement Mode Power MOSFET





PJM08P40TE

P-Channel Enhancement Mode Power MOSFET

Package Outline

TO-252

Dimensions in mm

