



CEP09N7A/CEB09N7A CEF09N7A

Electrical Characteristics $T_C = 25^\circ\text{C}$ unless otherwise noted

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Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Off Characteristics						
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS} = 0V, I_D = 250\mu A$	700			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 700V, V_{GS} = 0V$			50	μA
Gate Body Leakage Current, Forward	I_{GSSF}	$V_{GS} = 30V, V_{DS} = 0V$			100	nA
Gate Body Leakage Current, Reverse	I_{GSSR}	$V_{GS} = -30V, V_{DS} = 0V$			-100	nA
On Characteristics^b						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{GS} = V_{DS}, I_D = 250\mu A$	2		4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 5A$			1.2	Ω
Dynamic Characteristics^c						
Forward Transconductance	g_{FS}	$V_{DS} = 5V, I_D = 8A$		8		S
Input Capacitance	C_{iss}	$V_{DS} = 25V, V_{GS} = 0V,$ $f = 1.0\text{ MHz}$		1800		pF
Output Capacitance	C_{oss}			160		pF
Reverse Transfer Capacitance	C_{rss}			17		pF
Switching Characteristics^c						
Turn-On Delay Time	$t_{d(on)}$	$V_{DD} = 300V, I_D = 8A,$ $V_{GS} = 10V, R_{GEN} = 10\Omega$		20	40	ns
Turn-On Rise Time	t_r			7	14	ns
Turn-Off Delay Time	$t_{d(off)}$			38	76	ns
Turn-Off Fall Time	t_f			7	14	ns
Total Gate Charge	Q_g	$V_{DS} = 480V, I_D = 8A,$ $V_{GS} = 10V$		32	42.5	nC
Gate-Source Charge	Q_{gs}			10		nC
Gate-Drain Charge	Q_{gd}			9		nC
Drain-Source Diode Characteristics and Maximum Ratings						
Drain-Source Diode Forward Current	I_S^g				8	A
Drain-Source Diode Forward Voltage ^b	V_{SD}	$V_{GS} = 0V, I_S = 8A$			1.6	V
Notes : a.Repetitive Rating : Pulse width limited by maximum junction temperature . b.Pulse Test : Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$. c.Guaranteed by design, not subject to production testing. e.Limited only by maximum temperature allowed . f. Pulse width limited by safe operating area . g.Full package $I_{S(max)} = 4.3A$.						

