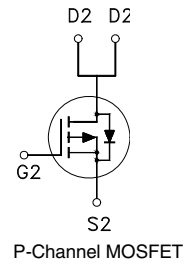
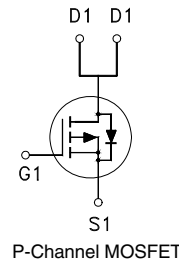
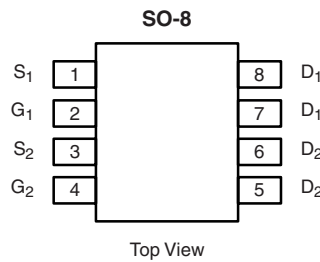


# CRM7342S08

## Dual P-Channel Logic Level Enhancement Mode Field Effect Transistor

### Product Summary:

$BV_{DSS}$	-60V
$R_{DS(on)}$ (MAX.)	24m $\Omega$
$I_D$	-8A



UIS, Rg 100% Tested

Pb-Free Lead Plating

**MARKING**  
7342S08



**RoHS**  
COMPLIANT

### ABSOLUTE MAXIMUM RATINGS ( $T_A = 25\text{ }^\circ\text{C}$ Unless Otherwise Noted)

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNIT
Gate-Source Voltage		$V_{GS}$	$\pm 20$	V
Continuous Drain Current	$T_C = 25\text{ }^\circ\text{C}$	$I_D$	-5	A
	$T_C = 70\text{ }^\circ\text{C}$		-4	
Pulsed Drain Current <sup>1</sup>		$I_{DM}$	-25	
Avalanche Current		$I_{AS}$	-15	
Avalanche Energy	$L = 0.1\text{mH}$	$E_{AS}$	11.25	mJ
Power Dissipation	$T_C = 25\text{ }^\circ\text{C}$	$P_D$	3.4	W
	$T_C = 70\text{ }^\circ\text{C}$		2.7	
Operating Junction & Storage Temperature Range		$T_j, T_{stg}$	-55 to 150	$^\circ\text{C}$

### THERMAL RESISTANCE RATINGS

THERMAL RESISTANCE	SYMBOL	TYPICAL	MAXIMUM	UNIT
Junction-to-Case	$R_{\theta JC}$		37	$^\circ\text{C} / \text{W}$
Junction-to-Ambient <sup>3</sup>	$R_{\theta JA}$		62.5	

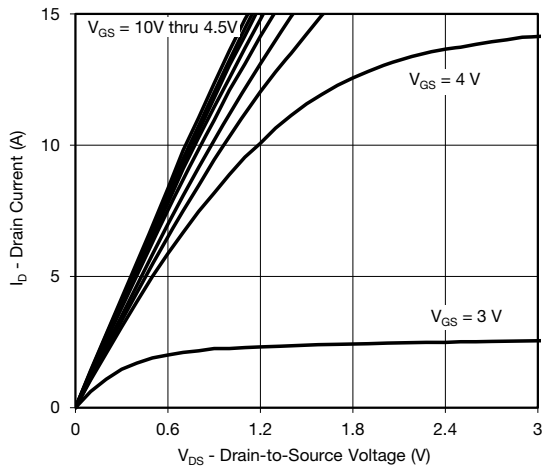
## ELECTRICAL CHARACTERISTICS (T<sub>J</sub> = 25 °C, Unless Otherwise Noted)

PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
<b>STATIC</b>						
Drain-Source Breakdown Voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> = 0V, I <sub>D</sub> = -250μA	-60			V
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = -250μA	-1		-3	
Gate-Body Leakage	I <sub>GSS</sub>	V <sub>DS</sub> = 0V, V <sub>GS</sub> = ±20V			±100	nA
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> = -60V, V <sub>GS</sub> = 0V			-1	μA
		V <sub>DS</sub> = -60V, V <sub>GS</sub> = 0V, T <sub>J</sub> = 55 °C			-5	
On-State Drain Current <sup>1</sup>	I <sub>D(ON)</sub>	V <sub>DS</sub> = -10V, V <sub>GS</sub> = -10V	-30			A
Drain-Source On-State Resistance <sup>1</sup>	R <sub>DS(ON)</sub>	V <sub>GS</sub> = -10V, I <sub>D</sub> = -3.5A		66	85	mΩ
		V <sub>GS</sub> = -4.5V, I <sub>D</sub> = -2.8A		75	90	
Forward Transconductance <sup>1</sup>	g <sub>fs</sub>	V <sub>DS</sub> = -30V, I <sub>D</sub> = -3.5A		11		S
<b>DYNAMIC</b>						
Input Capacitance	C <sub>iss</sub>	V <sub>GS</sub> = 0V, V <sub>DS</sub> = -30V, f = 1MHz		832		pF
Output Capacitance	C <sub>oss</sub>			88		
Reverse Transfer Capacitance	C <sub>rss</sub>			63		
Gate Resistance	R <sub>g</sub>	f = 1MHz		9		Ω
Total Gate Charge <sup>1,2</sup>	Q <sub>g</sub>	V <sub>DS</sub> = -30V, V <sub>GS</sub> = -10V, I <sub>D</sub> = -3.5A		10.1		nC
Gate-Source Charge <sup>1,2</sup>	Q <sub>gs</sub>			3.3		
Gate-Drain Charge <sup>1,2</sup>	Q <sub>gd</sub>			3.9		
Turn-On Delay Time <sup>1,2</sup>	t <sub>d(on)</sub>	V <sub>DS</sub> = -30V, I <sub>D</sub> = -2.8A, V <sub>GS</sub> = -10V, R <sub>GS</sub> = 1Ω		8		nS
Rise Time <sup>1,2</sup>	t <sub>r</sub>			6		
Turn-Off Delay Time <sup>1,2</sup>	t <sub>d(off)</sub>			35		
Fall Time <sup>1,2</sup>	t <sub>f</sub>			16		
<b>SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (T<sub>C</sub> = 25 °C)</b>						
Continuous Current	I <sub>S</sub>				-3.5	A
Pulsed Current <sup>3</sup>	I <sub>SM</sub>				-20	
Forward Voltage <sup>1</sup>	V <sub>SD</sub>	I <sub>F</sub> = I <sub>S</sub> , V <sub>GS</sub> = 0V		-0.85	-1.2	V
Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> = I <sub>S</sub> , dI <sub>F</sub> /dt = 100A / μS		32		nS
Reverse Recovery Charge	Q <sub>rr</sub>			45		nC

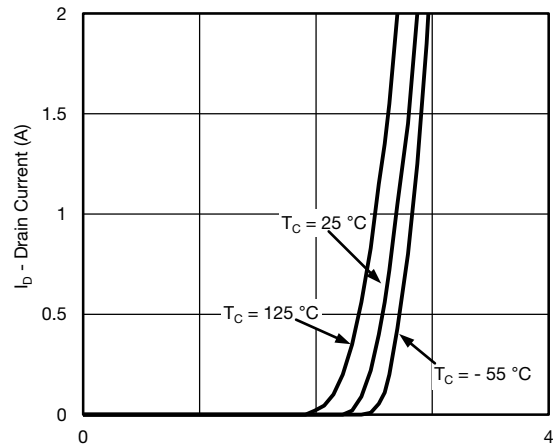
### Notes

- Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2 %.
- Guaranteed by design, not subject to production testing.

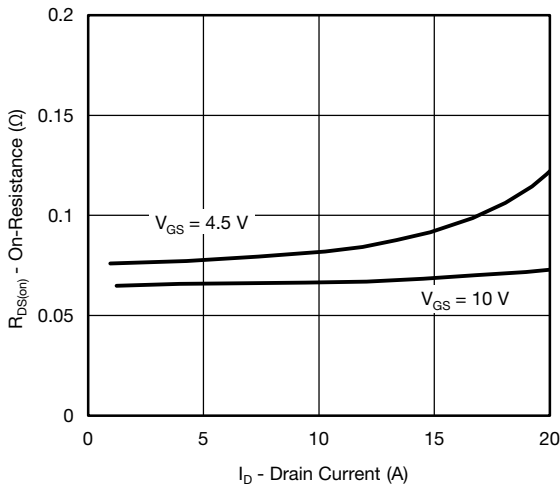
## TYPICAL CHARACTERISTICS (25 °C, unless otherwise noted)



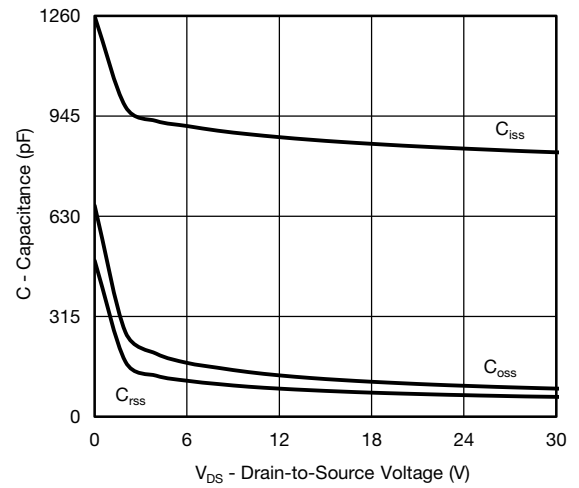
Output Characteristics



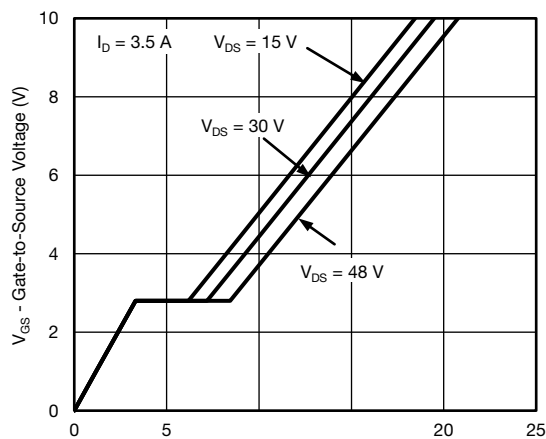
Transfer Characteristics



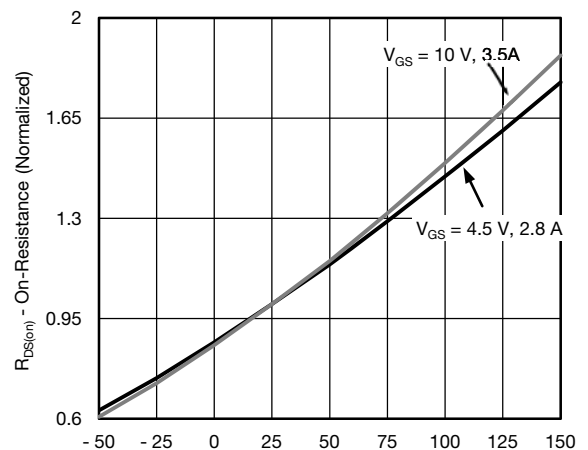
On-Resistance vs. Drain Current



Capacitance

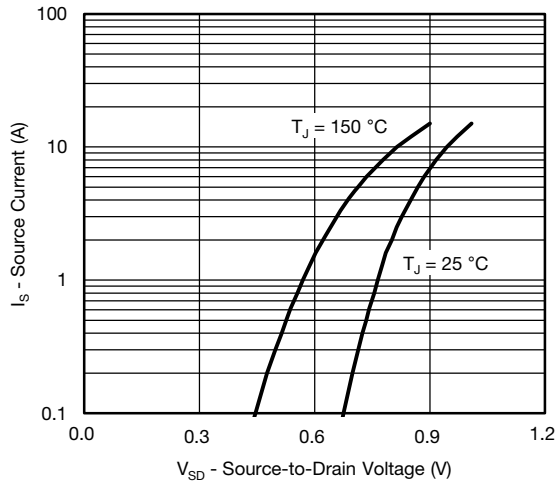


Gate Charge

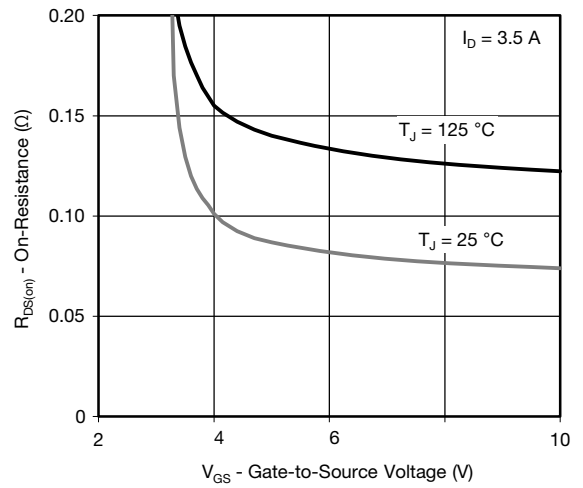


On-Resistance vs. Junction Temperature

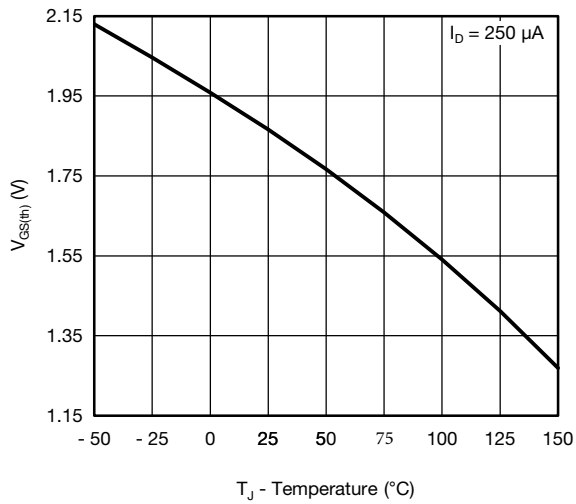
## TYPICAL CHARACTERISTICS (25 °C, unless otherwise noted)



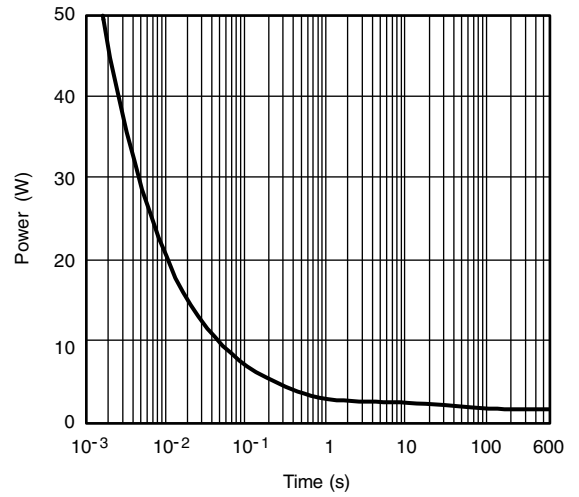
Source-Drain Diode Forward Voltage



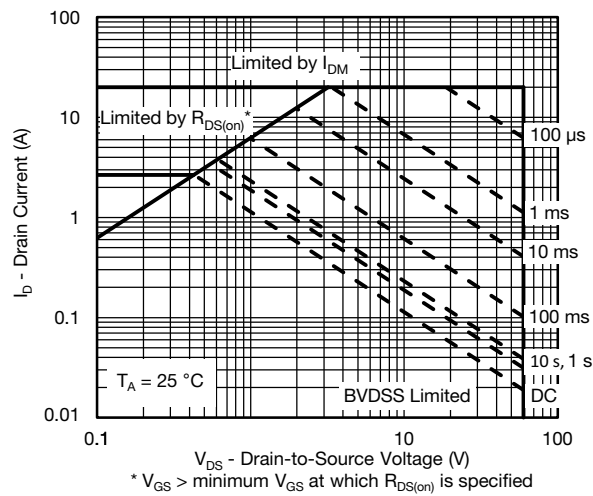
On-Resistance vs. Gate-to-Source Voltage



Threshold Voltage

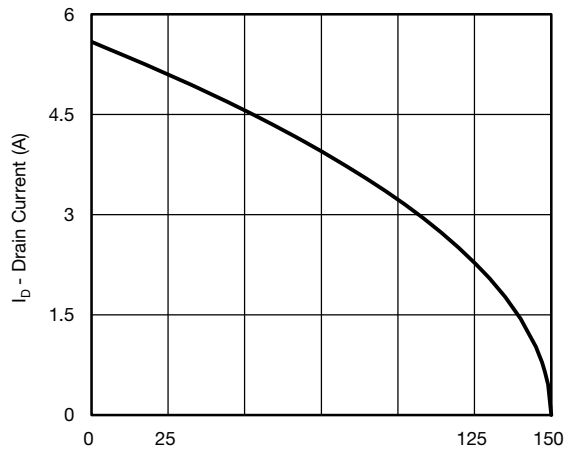


Single Pulse Power, Junction-to-Ambient

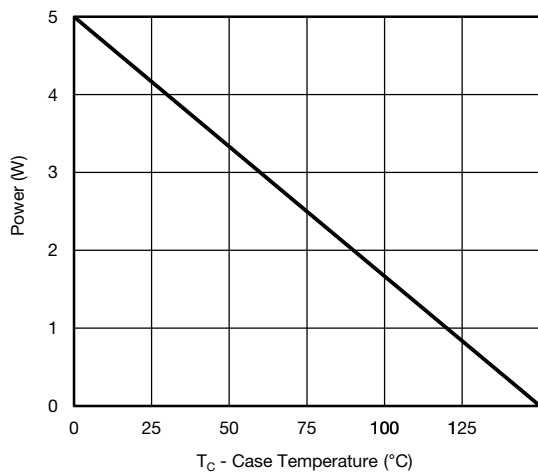


Safe Operating Area

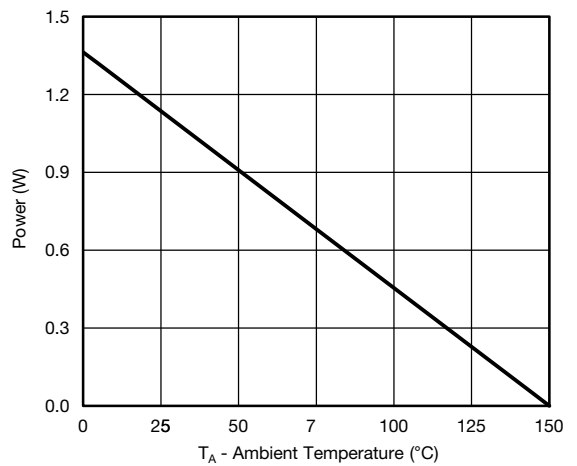
**TYPICAL CHARACTERISTICS** (25 °C, unless otherwise noted)



**Current Derating\***

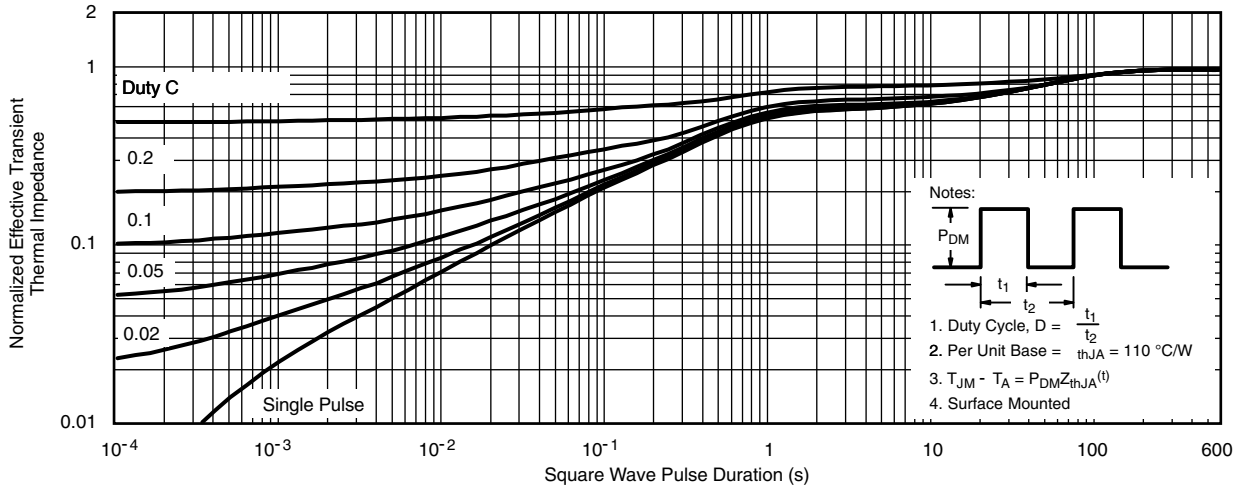


**Power, Junction-to-Foot**

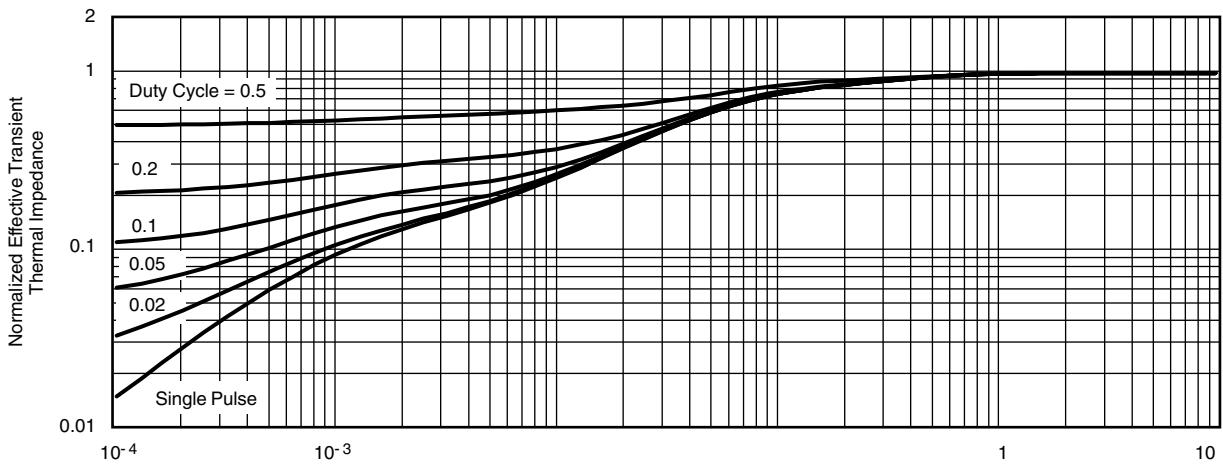


**Power Derating, Junction-to-Ambient**

**TYPICAL CHARACTERISTICS** (25 °C, unless otherwise noted)



**Normalized Thermal Transient Impedance, Junction-to-Ambient**



**Normalized Thermal Transient Impedance, Junction-to-Foot**