查询SUM110N08-10供应商 捷多邦，专业PCB打样工厂，24小时加急出货

N-Channel 75-V (D-S) MOSFET

PRODUCT SUMMARY		
$V_{(BR)DSS}$ (V)	$r_{DS(on)}$ (Ω)	I_D (A)
75	0.010 @ V_{GS} = 10 V	110

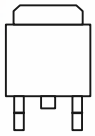
FEATURES

- TrenchFET® Power MOSFET
- New Low Thermal Resistance Package

APPLICATIONS

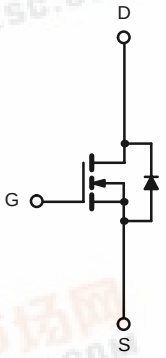
- Automotive
  - Boardnet 42-VEP and ABS
  - Motor Drives
- High Current
- DC/DC Converters

TO-263



Top View

SUM110N08-10



N-Channel MOSFET

ABSOLUTE MAXIMUM RATINGS (T_C = 25°C UNLESS OTHERWISE NOTED)				
Parameter		Symbol	Limit	Unit
Drain-Source Voltage		V_{DS}	75	V
Gate-Source Voltage		V_{GS}	±20	
Continuous Drain Current (T_J = 175°C)	T_C = 25°C	I_D	110	A
	T_C = 125°C		63[a]	
Pulsed Drain Current		I_{DM}	350	
Avalanche Current		I_{AR}	75	
Repetitive Avalanche Energy[a]	L = 0.1 mH	E_{AR}	280	mJ
Maximum Power Dissipation[a]	T_C = 25°C	P_D	200[b]	W
	T_A = 25°C [c]		3.7	
Operating Junction and Storage Temperature Range		T_J, T_{stg}	-55 to 175	°C

THERMAL RESISTANCE RATINGS				
Parameter		Symbol	Limit	Unit
Junction-to-Ambient	PCB Mount[c]	R_{thJA}	40	°C/W
Junction-to-Case		R_{thJC}	0.75	

Notes
a. Duty cycle ≤ 1%.
b. See SOA curve for voltage derating.
c. When mounted on 1" square PCB (FR-4 material).

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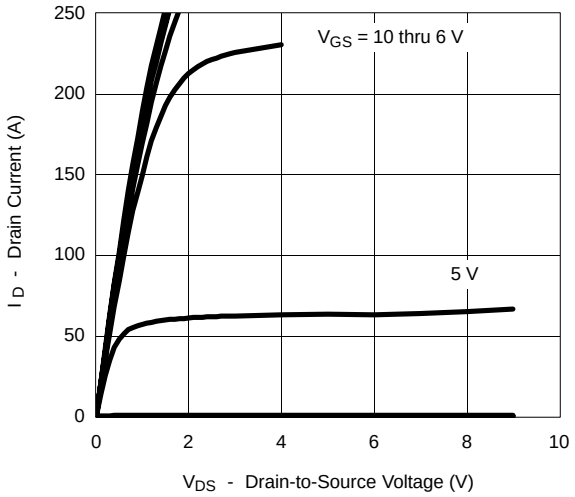
SPECIFICATIONS (T_J =25°C UNLESS OTHERWISE NOTED)						
Parameter	**Symbol**	**Test Condition**	**Min**	**Typ**	**Max**	**Unit**
Static						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{DS} = 0 V, I_D = 250 μA	75			V
Gate-Threshold Voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = 250 μA	2.5		4.0	
Gate-Body Leakage	I_{GSS}	V_{DS} = 0 V, V_{GS} = ±20 V			±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = 60 V, V_{GS} = 0 V			1	μA
		V_{DS} = 60 V, V_{GS} = 0 V, T_J = 125°C			50	
		V_{DS} = 60 V, V_{GS} = 0 V, T_J = 175°C			250	
On-State Drain Current[a]	$I_{D(on)}$	V_{DS} ≥ 5 V, V_{GS} = 10 V	120			A
Drain-Source On-State Resistance[a]	$r_{DS(on)}$	V_{GS} = 10 V, I_D = 30 A		0.0055	0.010	Ω
		V_{GS} = 10 V, I_D = 30 A, T_J = 125°C			0.0185	
		V_{GS} = 10 V, I_D = 30 A, T_J = 175°C			0.0245	
Forward Transconductance[a]	g_{fs}	V_{DS} = 15 V, I_D = 30 A	30			S
Dynamic[b]						
Input Capacitance	C_{iss}	V_{GS} = 0 V, V_{DS} = 25 V, f = 1 MHz		5250		pF
Output Capacitance	C_{oss}			700		
Reverse Transfer Capacitance	C_{rss}			310		
Total Gate Charge[c]	Q_g	V_{DS} = 35 V, V_{GS} = 10 V, I_D = 110 A		90	165	nC
Gate-Source Charge[c]	Q_{gs}			24		
Gate-Drain Charge[c]	Q_{gd}			27		
Turn-On Delay Time[c]	$t_{d(on)}$	V_{DD} = 35 V, R_L = 0.4 Ω I_D ≅ 110 A, V_{GEN} = 10 V, R_G = 2.5 Ω		20	30	ns
Rise Time[c]	t_r			100	150	
Turn-Off Delay Time[c]	$t_{d(off)}$			45	70	
Fall Time[c]	t_f			75	115	
Source-Drain Diode Ratings and Characteristics (T_C = 25°C)[b]						
Continuous Current	I_S				110	A
Pulsed Current	I_{SM}				350	
Forward Voltage[a]	V_{SD}	I_F = 110 A, V_{GS} = 0 V		1.0	1.5	V
Reverse Recovery Time	t_{rr}	I_F = 85 A, di/dt = 100 A/μs		75	120	ns
Peak Reverse Recovery Current	$I_{RM(REC)}$			3.5	7	A
Reverse Recovery Charge	Q_{rr}			0.13	0.30	μC

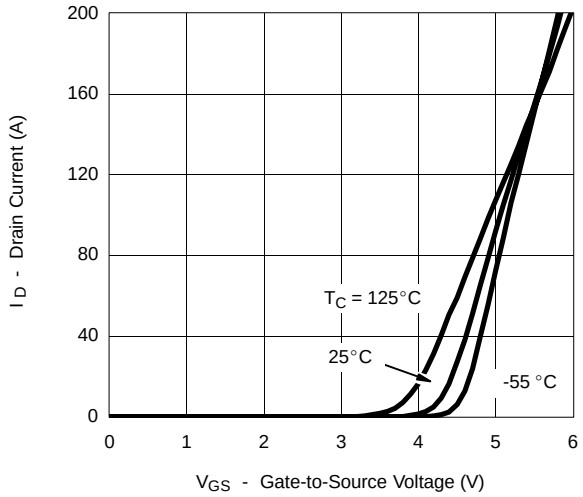
Notes
a. Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2%.
b. Guaranteed by design, not subject to production testing.
c. Independent of operating temperature.

TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)

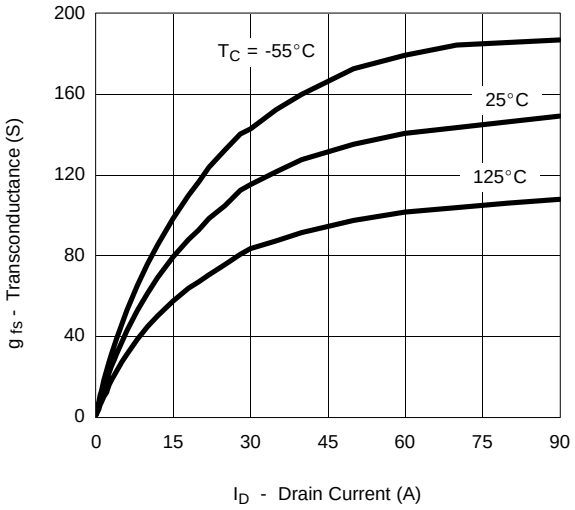
Output Characteristics



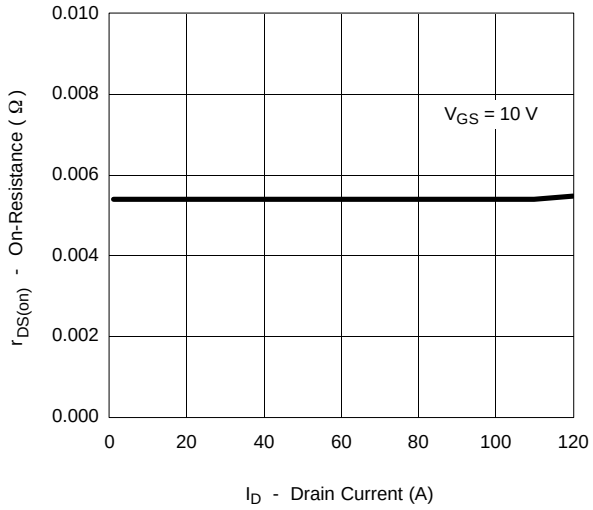
Transfer Characteristics



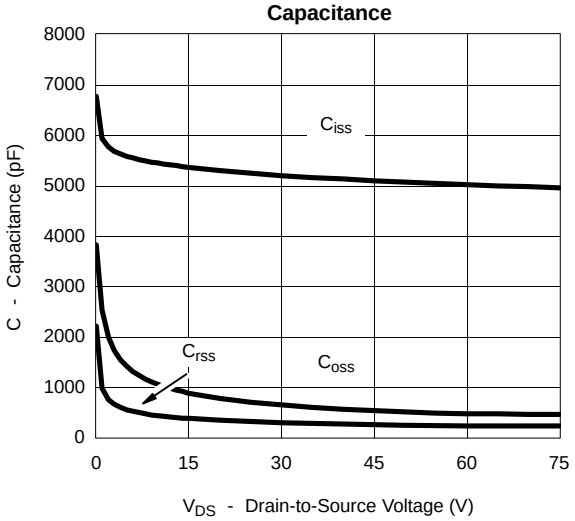
Transconductance



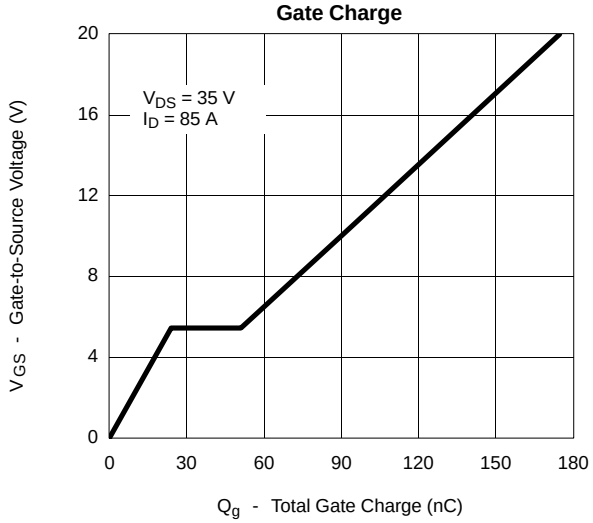
On-Resistance vs. Drain Current



Capacitance



Gate Charge



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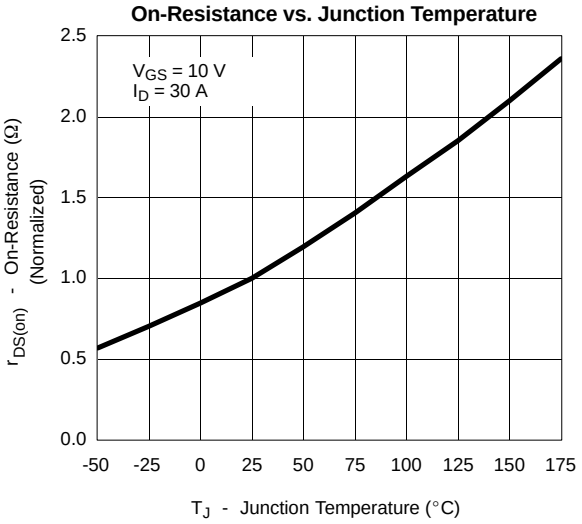
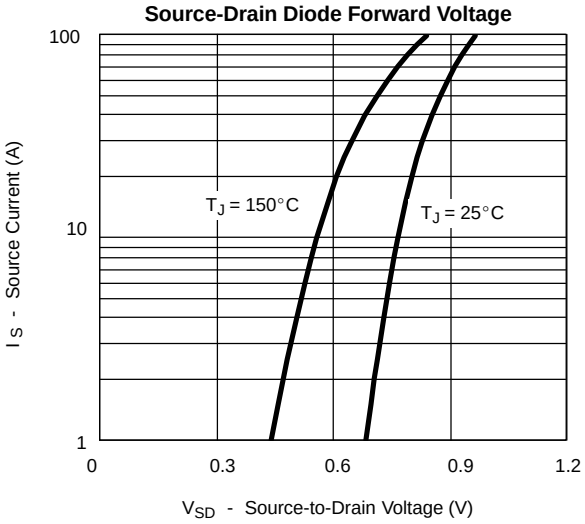
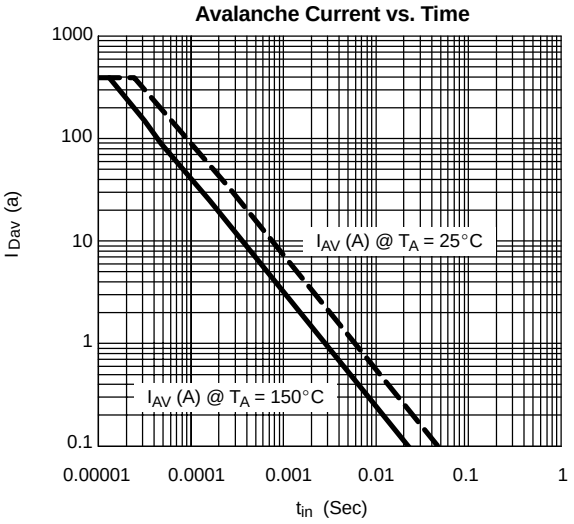
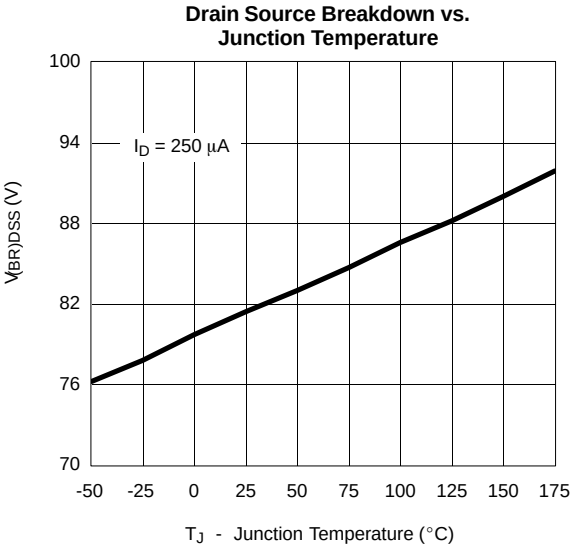


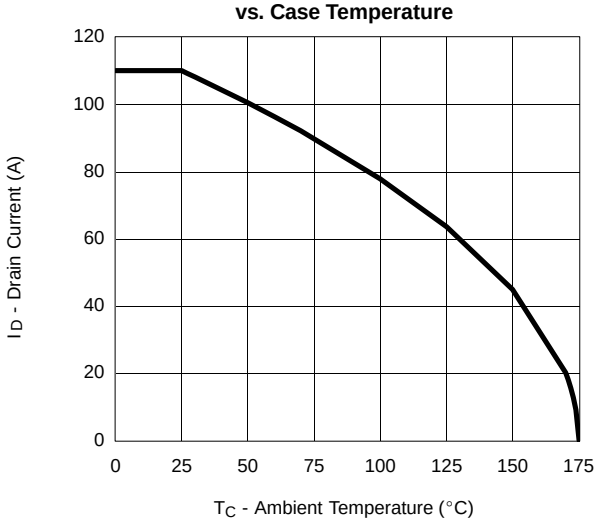




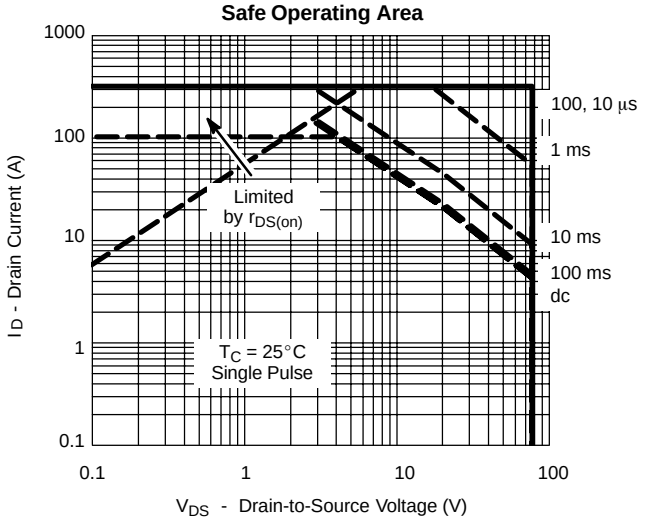
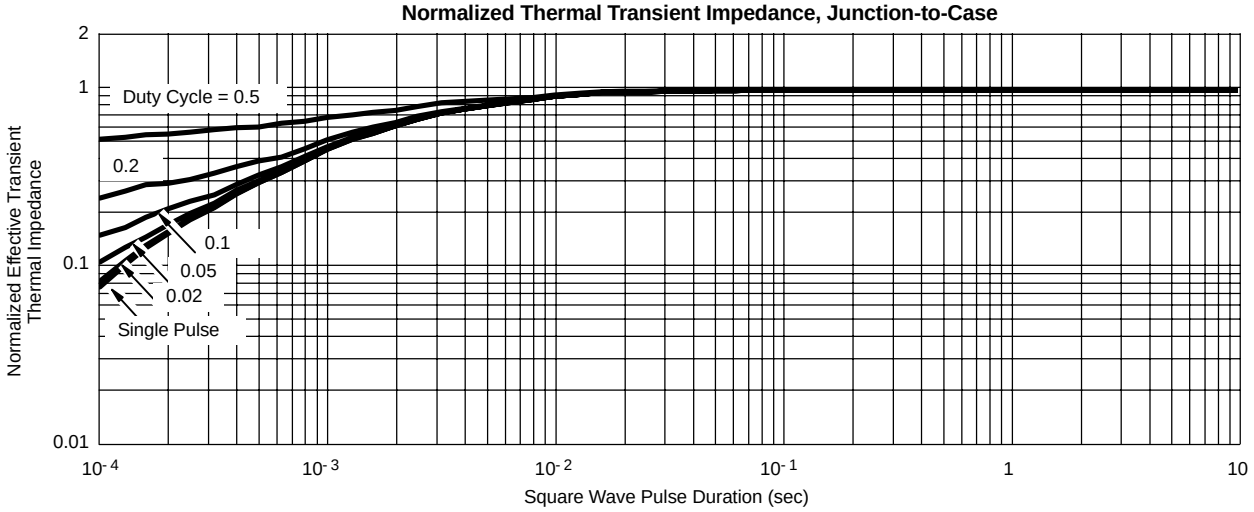


THERMAL RATINGS

Maximum Avalanche and Drain Current vs. Case Temperature



Safe Operating Area



Normalized Thermal Transient Impedance, Junction-to-Case