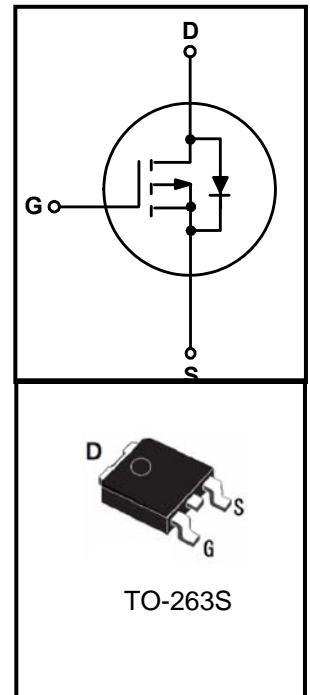


P-Channel Enhancement Mode MOSFET
Features

- Surface-mounted package
- Advanced trench cell design

Applications

- LCD TV appliances
- LCDM appliances
- High power inverter system


Limiting Values

Symbol	Parameter	Conditions	Min	Max	Unit
V_{DS}	Drain-Source Voltage	$T_C = 25\text{ }^\circ\text{C}$	- 100	-	V
V_{GS}	Gate-Source Voltage	$T_C = 25\text{ }^\circ\text{C}$	-	± 20	V
I_D^*	Drain Current (DC)	$T_C = 25\text{ }^\circ\text{C}, V_{GS} = - 10\text{ V}$	-	- 90	A
		$T_C = 25\text{ }^\circ\text{C}, V_{GS} = - 10\text{ V}$		- 50	A
I_{DM}^{**}	Drain Current (Pulsed)	$T_C = 25\text{ }^\circ\text{C}, V_{GS} = - 10\text{ V}$	-	- 240	A
P_{tot}	Drain power dissipation	$T_C = 25\text{ }^\circ\text{C}$	-	300	W
T_{stg}	Storage Temperature		-55	150	$^\circ\text{C}$
T_J	Junction Temperature		-	150	$^\circ\text{C}$
I_S	Continuous-Source Current	$T_C = 25\text{ }^\circ\text{C}$	-	- 90	A
E_{AS}^*	Single Pulsed Avalanche Energy	$V_{DD} = - 50\text{ V}, L = 1.0\text{ mH}$	-	842	mJ
$R_{\theta JA}^*$	Thermal Resistance- Junction to Ambient		-	45	$^\circ\text{C/W}$
$R_{\theta JC}^*$	Thermal Resistance- Junction to Case		-	0.5	

Notes :

* Surface Mounted on 1 in² pad area, $t \leq 10\text{ sec}$

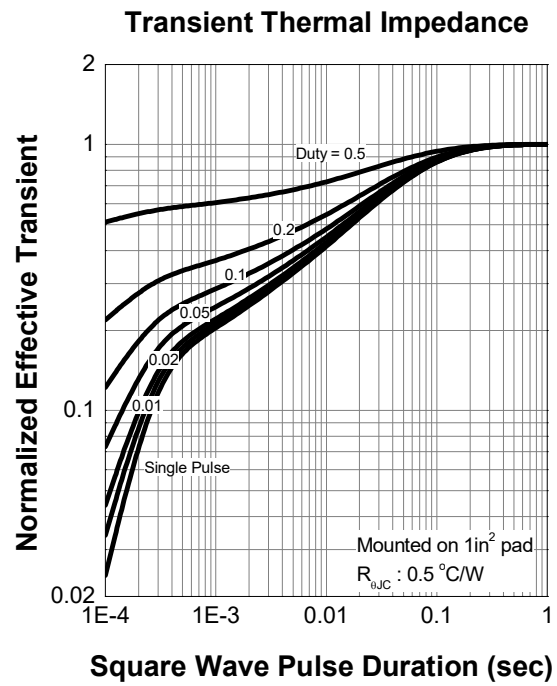
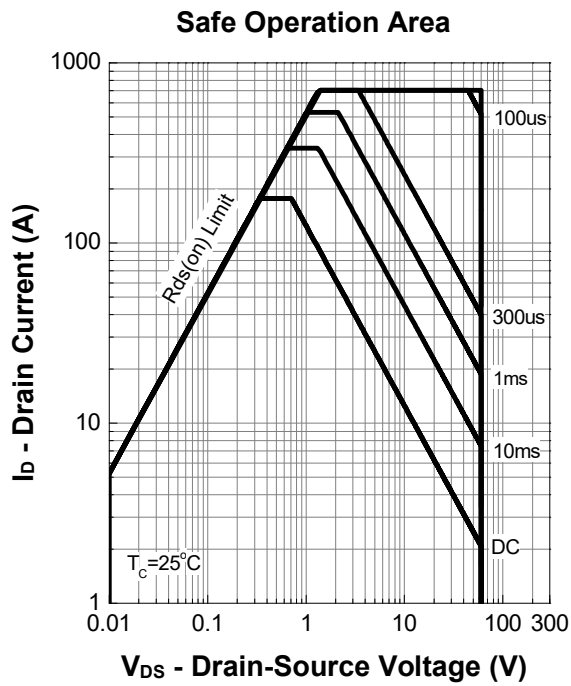
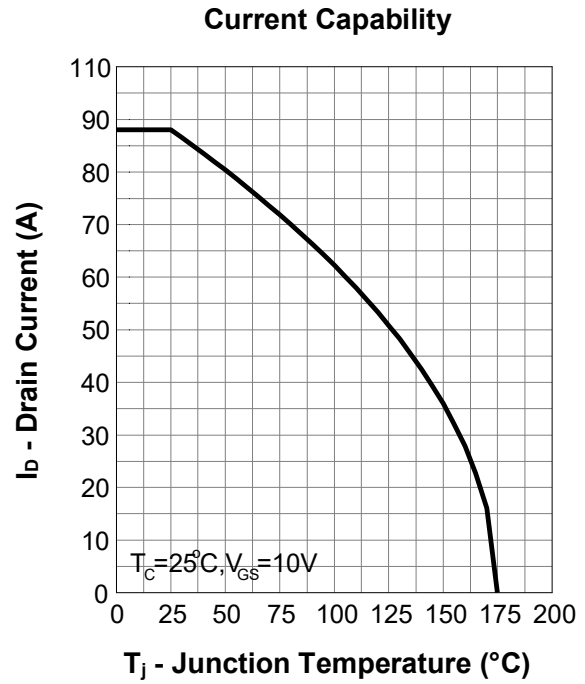
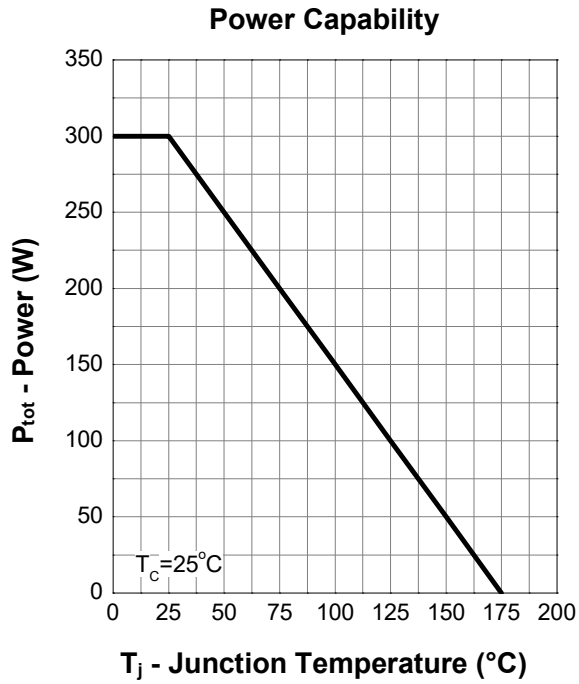
** Pulse width $\leq 300\text{ }\mu\text{s}$, duty cycle $\leq 2\%$

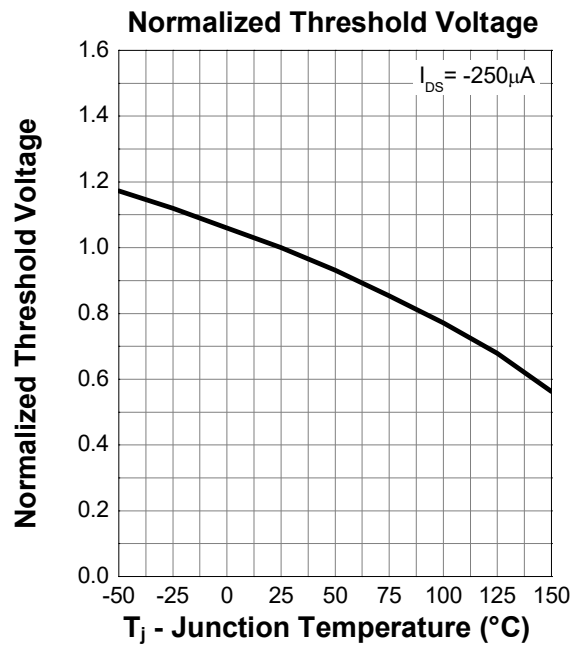
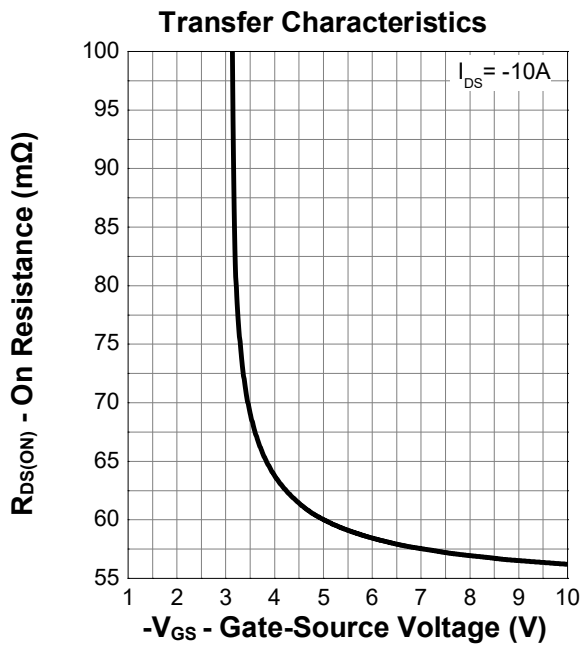
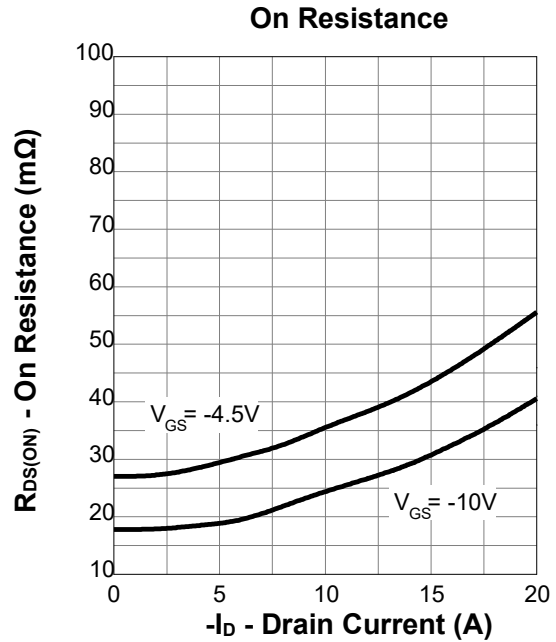
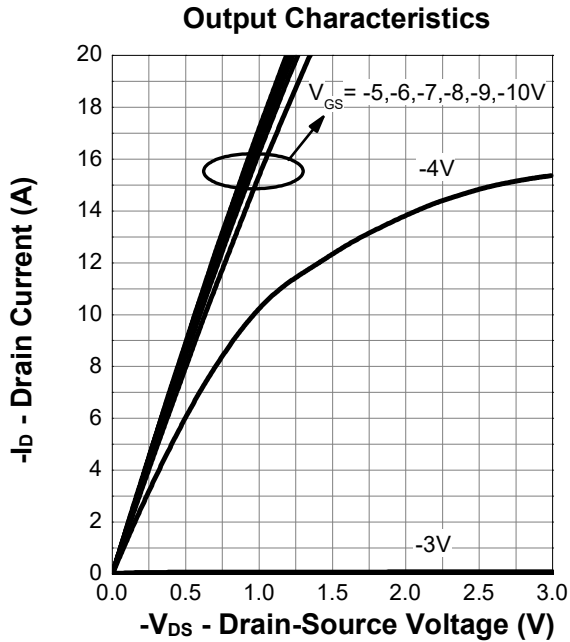
Electrical Characteristics ($T_A = 25\text{ }^\circ\text{C}$ Unless Otherwise Noted)

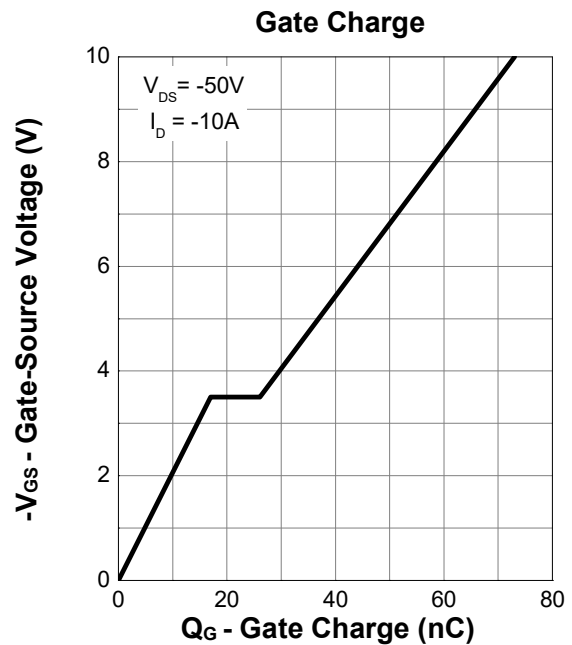
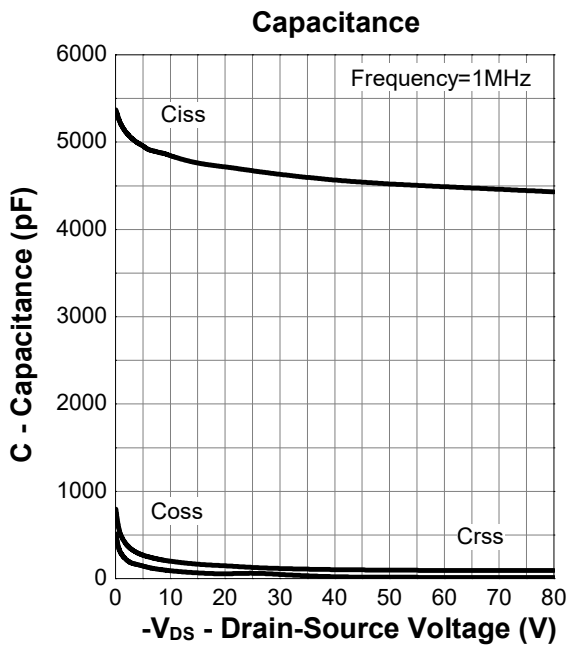
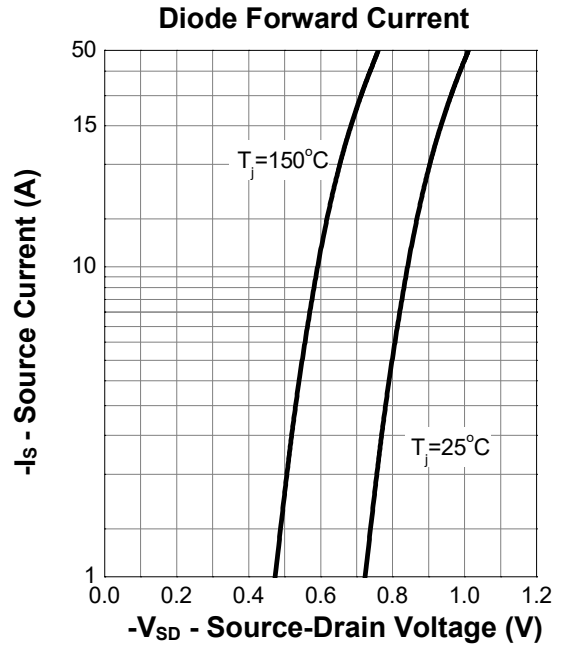
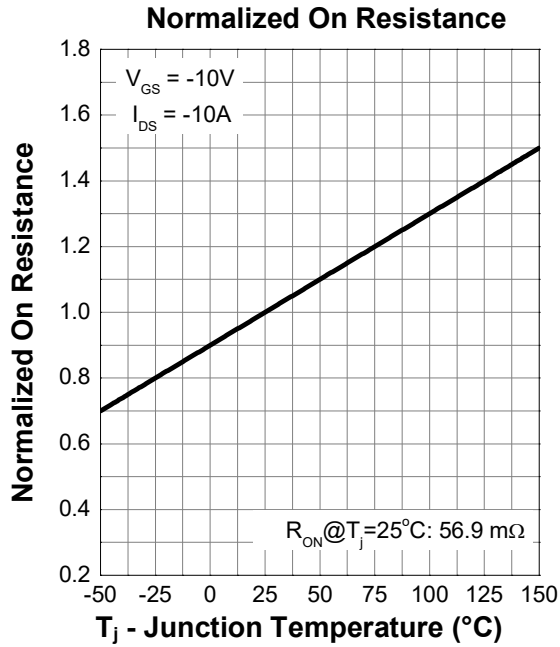
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
Static Characteristics						
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS} = 0\text{ V}, I_{DS} = -250\text{ }\mu\text{A}$	-100	-	-	V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS} = V_{GS}, I_{DS} = -250\text{ }\mu\text{A}$	-1	-	-3	V
I_{DSS}	Drain Leakage Current	$V_{DS} = -50\text{ V}, V_{GS} = 0\text{ V}$	-	-	-1	μA
		$T_J = 85\text{ }^\circ\text{C}$	-	-	-25	μA
I_{GSS}	Gate Leakage Current	$V_{GS} = 0\text{ V}, V_{GS} = \pm 20\text{ V}$	-	-	± 100	nA
$R_{DS(on)}^a$	On-State Resistance	$V_{GS} = -10\text{ V}, I_{DS} = -30\text{ A}$	-	17	20	m Ω
		$V_{GS} = -4.5\text{ V}, I_{DS} = -20\text{ A}$	-	22	25	
Diode Characteristics						
V_{SD}^a	Diode Forward Voltage	$I_{SD} = -10\text{ A}, V_{GS} = 0\text{ V}$	-	-	-1.2	V
t_{rr}	Reverse Recovery Time	$I_{DS} = -10\text{ A}, dI_{SD}/dt = 100\text{ A}/\mu\text{s}$	-	50	-	nS
Q_{rr}	Reverse Recovery Charge		-	90	-	nC
Dynamic Characteristics^b						
C_{iss}	Input Capacitance	$V_{GS} = 0\text{ V}, V_{DS} = -50\text{ V}$ Frequency = 1 MHz	-	6500	-	pF
C_{oss}	Output Capacitance		-	750	-	
C_{rss}	Reverse Transfer Capacitance		-	300	-	
$t_d(on)$	Turn-on Delay Time	$V_{DS} = -50\text{ V}, V_{GEN} = -10\text{ V},$ $R_G = 4.5\text{ }\Omega, R_L = 5\text{ }\Omega,$ $I_{DS} = -10\text{ A}$	-	15	-	nS
t_r	Turn-on Rise Time		-	58	-	
$t_d(off)$	Turn-off Delay Time		-	140	-	
t_f	Turn-off Fall Time		-	100	-	
Gate Charge Characteristics^b						
Q_g	Total Gate Charge	$V_{DS} = -50\text{ V}, V_{GS} = -10\text{ V},$ $I_{DS} = -10\text{ A}$	-	75	-	nC
Q_{gs}	Gate-Source Charge		-	11	-	
Q_{gd}	Gate-Drain Charge		-	47	-	

Notes :

- a : Pulse test ; pulse width $\leq 300\text{ }\mu\text{s}$, duty cycle $\leq 2\%$
b : Guaranteed by design, not subject to production testing

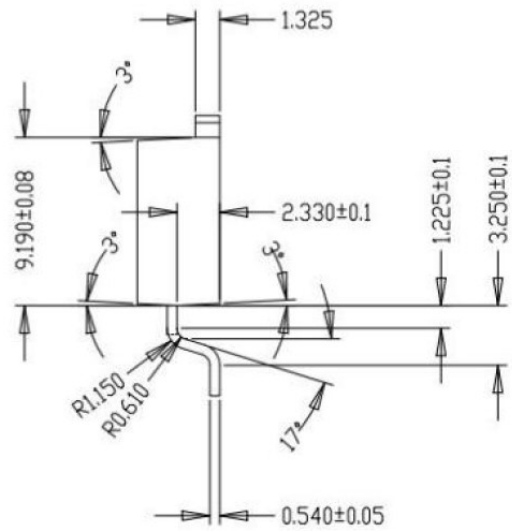
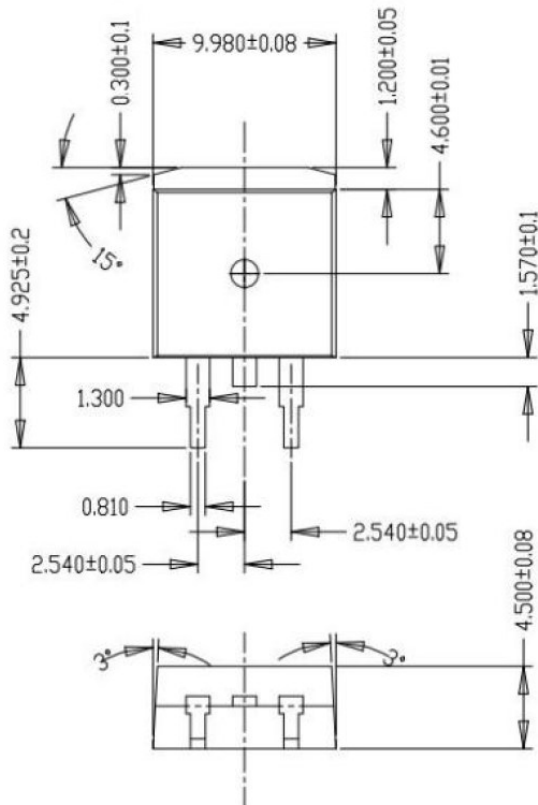
Typical Characteristics (Cont.)


Typical Characteristics (cont.)


Typical Characteristics (cont.)


Package Dimensions

TO263-3L



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文档类型: 说明书

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修改记录:

1. 原本
