



## 650V SuperJunction Power MOSFET

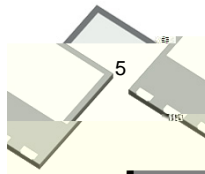
### Features

### Product Summary

Parameter	Value	Unit
$V_{DS}$	650	V
$V_{GS(th\_Typ)}$	3.5	V
$I_D$ (@ $V_{GS} = 10V$ ) <sup>(1)</sup>	4.0	A
$R_{DS(ON\_Typ)}$ (@ $V_{GS} = 10V$ )	890	m
$E_{oss@400V}$	0.68	J

### Applications

- Telecom / Server Power Supplies
- Industrial Power Supplies
- UPS / Solar
- Lighting / Charger / Adapter



### Ordering Information

Device	Package	# of Pins	Marking	MSL	$T_J$ (°C)	Media	Quantity (pcs)
JMH65R980APLN-13	DFN8080-4L	4	H65R980A	1	-55 to 150	13-inch Reel	3000

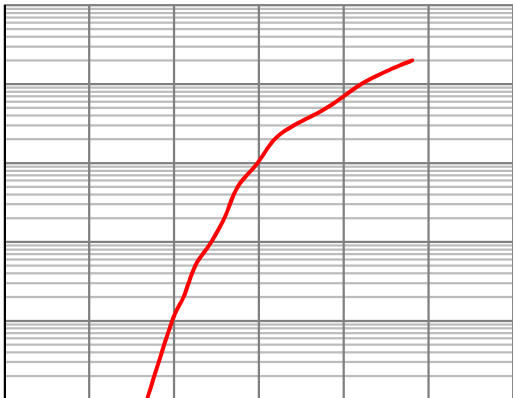
### Absolute Maximum Ratings (@ $T_A = 25^\circ C$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Drain-to-Source Voltage	$V_{DS}$	650	V
Gate-to-Source Voltage	$V_{GS}$	$\pm 20$	V
Continuous Drain Current <sup>(1)</sup>	$I_D$	$T_C = 25^\circ C$	4.0
		$T_C = 100^\circ C$	2.4
Pulsed Drain Current <sup>(2)</sup>	$I_{DM}$	16.0	A
Avalanche Current <sup>(3)</sup>	$I_{AS}$	4.0	A
Avalanche Energy <sup>(3)</sup>	$E_{AS}$	80	mJ
Power Dissipation <sup>(4)</sup>	$P_D$	$T_C = 25^\circ C$	37
		$T_C = 100^\circ C$	14.7
Junction & Storage Temperature Range	$T_{J\_STG}$	-55 to 150	°C

			$I_D = 2.0A$

	Symbol	Min.	Typ.	Max.	Unit
Gate Threshold Voltage	$V_{(BR)DSS}$	650			V
	$I_{DSS}$			1.0	
	$I_{GSS}$			±100	nA
	$V_{GS(th)}$	2.5	3.5	4.5	V
	$R_{DS(ON)}$		890	980	m
	$V_{SD}$		0.75		V
	$I_s$				

Typical Electrical & Thermal Characteristics





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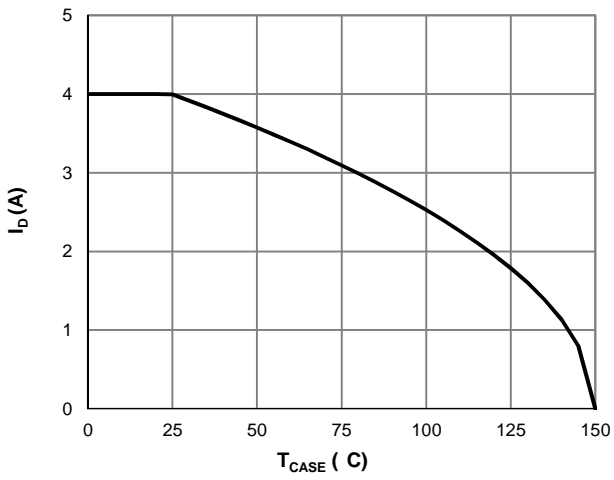


Figure 7: Current De-rating

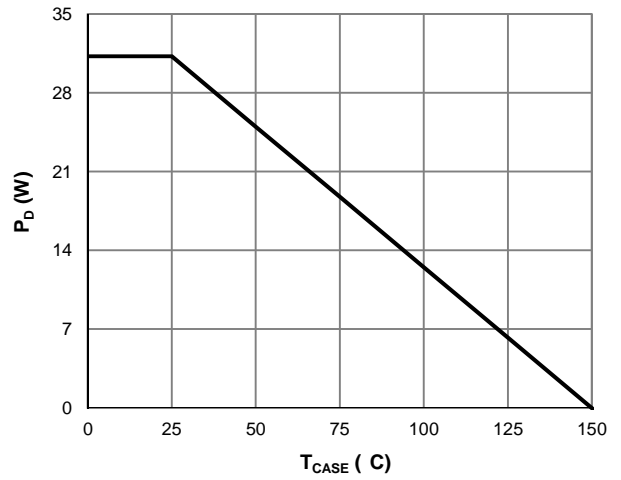


Figure 8: Power De-rating

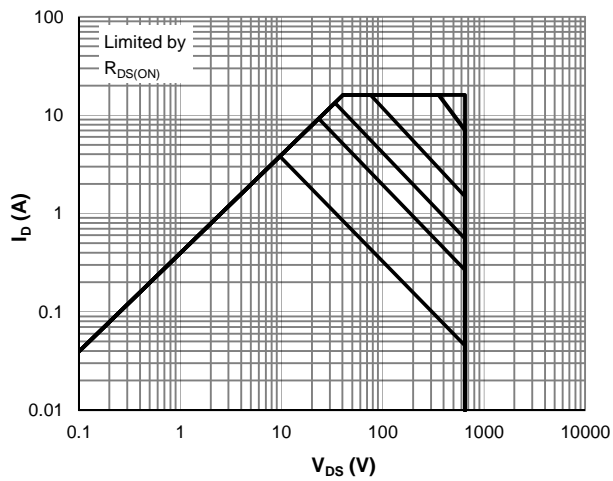
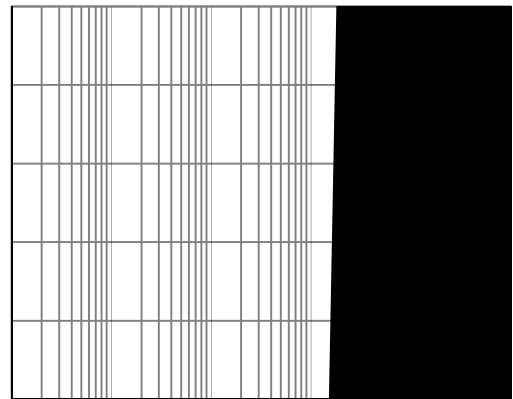
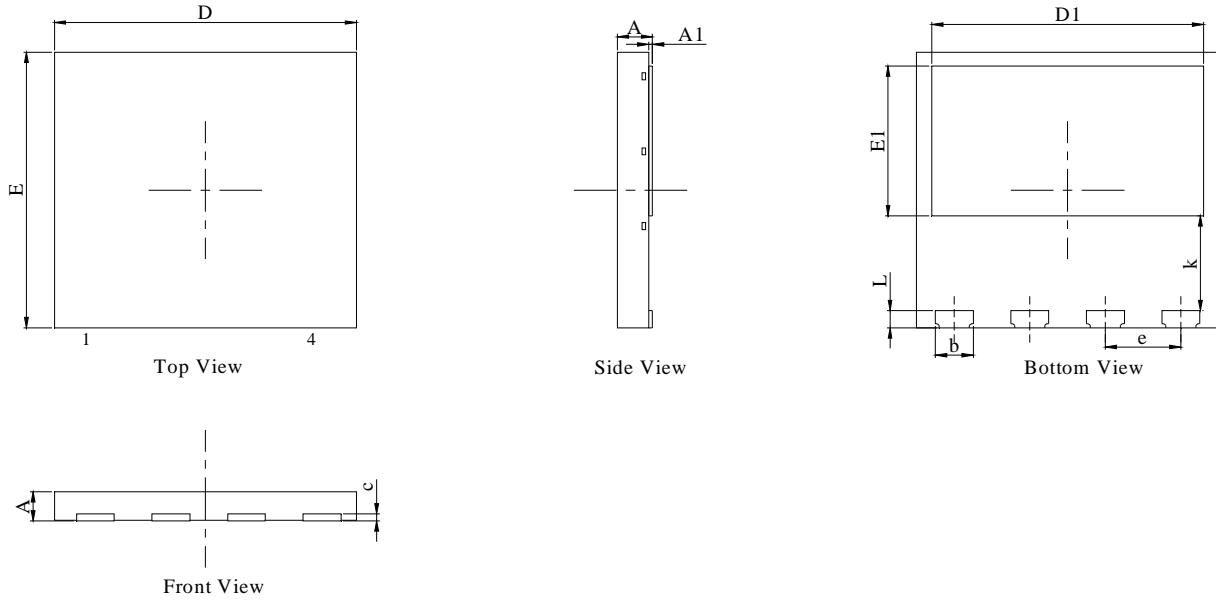


Figure 9: Maximum Safe Operating Area





DFN8080-4L Package Information



DIM.	MILLIMETER		
	MIN.	NOM.	MAX.
A	0.85	0.90	0.95
A1	--	--	0.05
b	0.95	1.00	1.05
c	--	0.20	--
D	7.90	8.00	8.10
D1	7.10	7.20	7.30
E	7.90	8.00	8.10
E1	4.25	4.35	4.45
L	0.40	0.50	0.60
k	2.75		
Y	2.00 BSC		

