



# P-Channel and P-Channel Complementary MOSFET

## Product Summary

$V_{DS}$	-100V
$I_D$	-17A
$R_{DS(ON)}$ ( at $V_{GS}=-10V$ )	85m
$R_{DS(ON)}$ ( at $V_{GS}=-4.5V$ )	105m
100% EAS Tested	
100% $V_{DS}$ Tested	

## General Description

Trench Power MOSFET technology  
 Excellent package for heat dissipation  
 High density cell design for low  $R_{DS(ON)}$   
 Moisture Sensitivity Level 1  
 Epoxy Meets UL 94 V-0 Flammability Rating  
 Halogen Free

## Applications

Power switching application  
 Uninterruptible power supply  
 DC-DC convertor

## Absolute Maximum Ratings ( $T_J=25$ unless otherwise noted)

Parameter			Symbol	Limit	Unit	
Drain-source Voltage			$V_{DS}$	-100	V	
Gate-source Voltage			$V_{GS}$	$\pm 20$	V	
Continuous Drain Current (Note 1,2)	Steady-State	$T_A=25$ , $V_{GS}=-10V$	$I_D$	-3.4	A	
		$T_A=100$ , $V_{GS}=-10V$		-2.1		
Continuous Drain Current (Note 1,3)	Steady-State	$T_C=25$ , $V_{GS}=-10V$		-17		
		$T_C=100$ , $V_{GS}=-10V$		-10.7		
Pulsed Drain Current	$T_C=25$ , $t_p=100\mu s$		$I_{DM}$	-60	A	
Avalanche energy			$V_{GS}=-10V, R_G$ , $L=0.5mH, I_{AS}=-16A$	EAS	64	mJ
Total Power Dissipation (Note 1,2)	Steady-State	$T_A=25$	$P_D$	2	W	
		$T_A=100$		0.8		
Total Power Dissipation (Note 1,3)	Steady-State	$T_C=25$		59		
		$T_C=100$		23		
Junction and Storage Temperature Range			$T_J, T_{STG}$	-55 +150		

## Thermal resistance

Parameter		Symbol	Typ	Max	Units
Thermal Resistance Junction-to-Ambient (Note 2)	Steady-State	R	50	60	/W
Thermal Resistance Junction-to-Case	Steady-State	R	1.7	2.1	

## Ordering Information (Example)

PREFERRED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)
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**Electrical Characteristics** ( $T_J=25$  unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
<b>Static Parameter</b>						
Drain-Source Breakdown Voltage	$BV_{DSS}$	$V_{GS}=0V, I_D=-$	-100	-	-	V



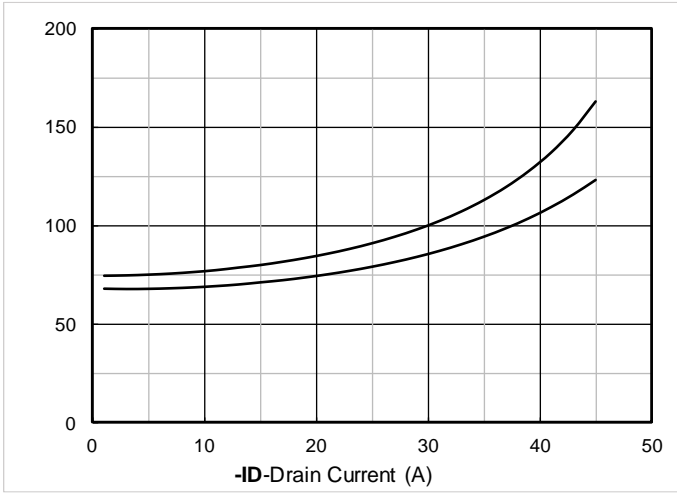


Figure 7.  $R_{DS(on)}$  VS Drain Current

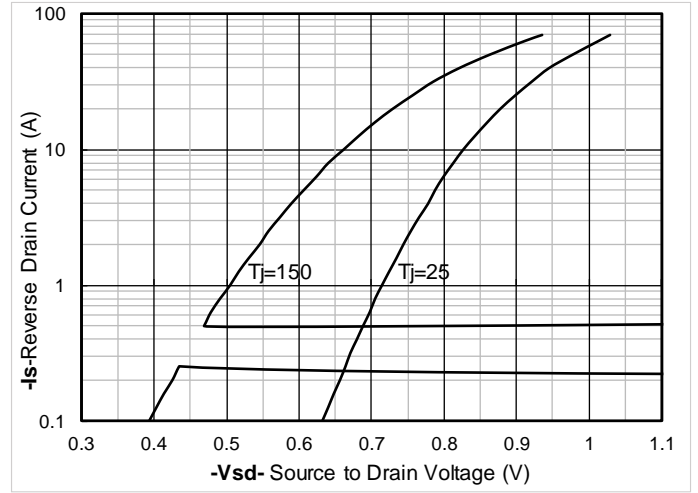


Figure 8. Forward characteristics of reverse diode

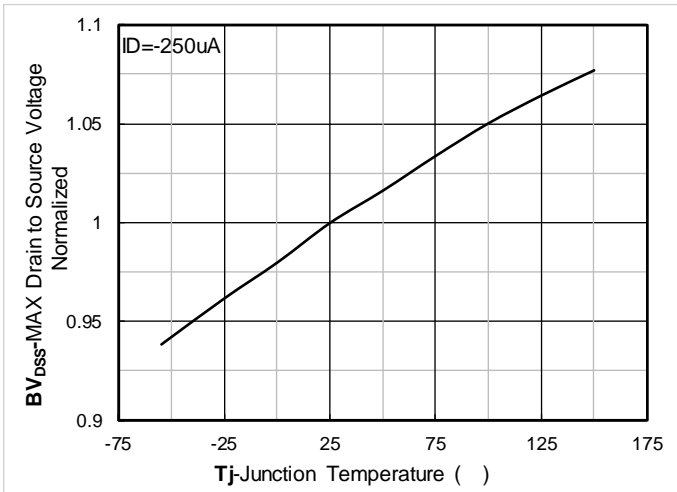


Figure 9. Normalized breakdown voltage

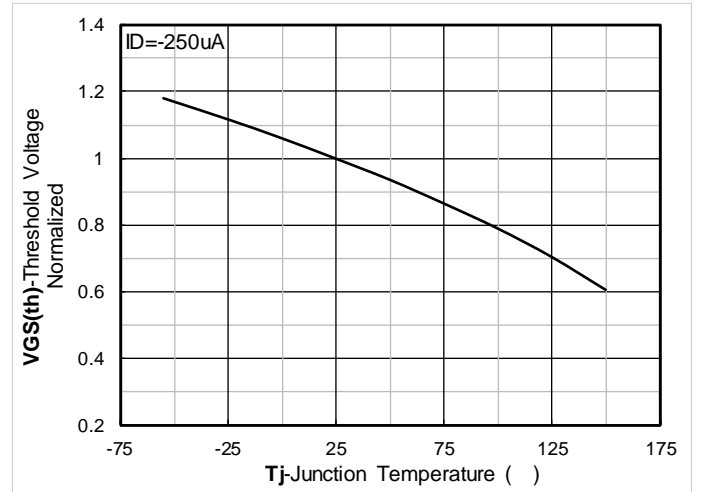


Figure 10. Normalized Threshold voltage

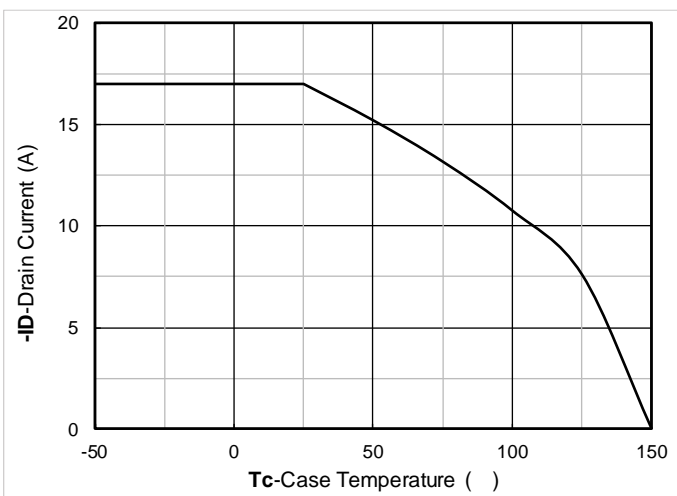


Figure 11. Current dissipation

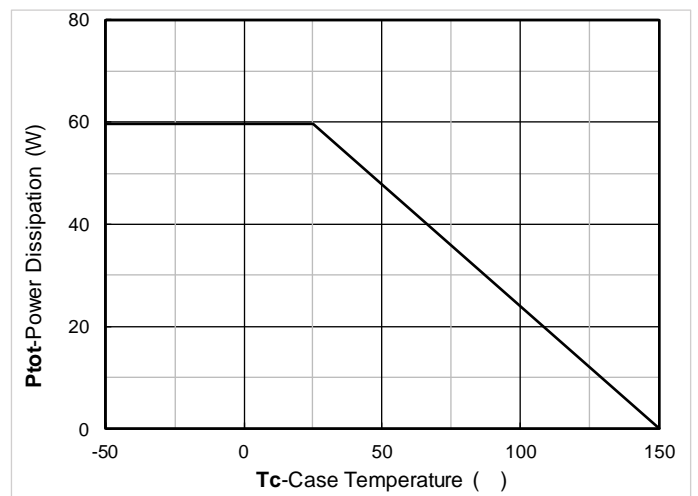


Figure 12. Power dissipation

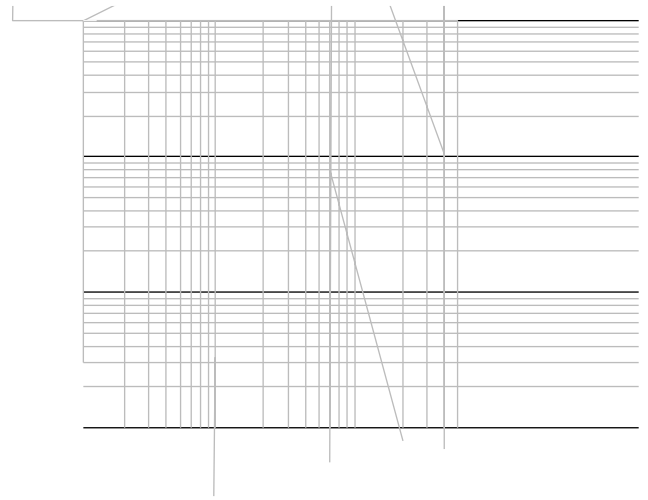
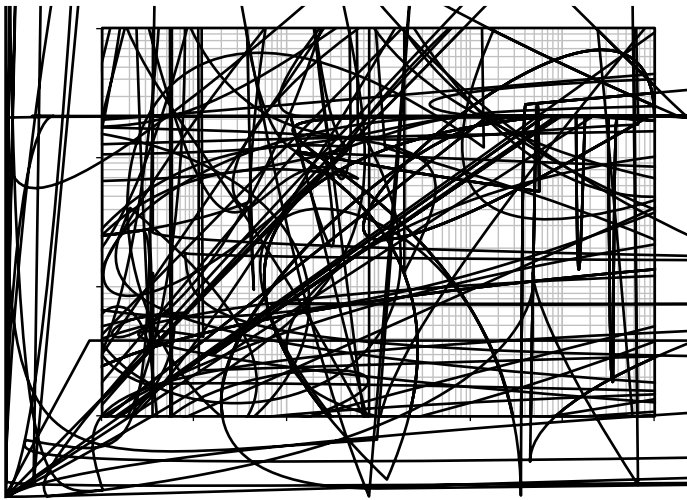
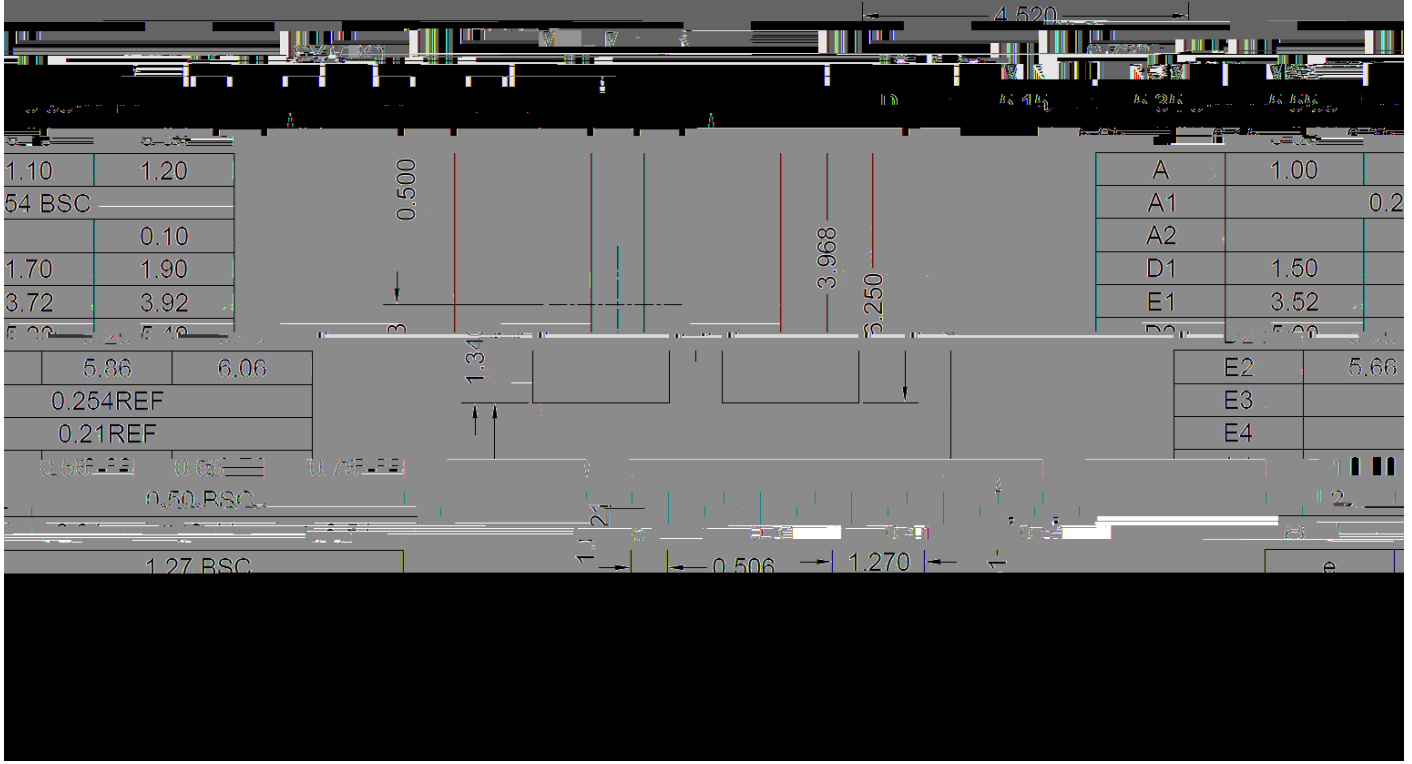
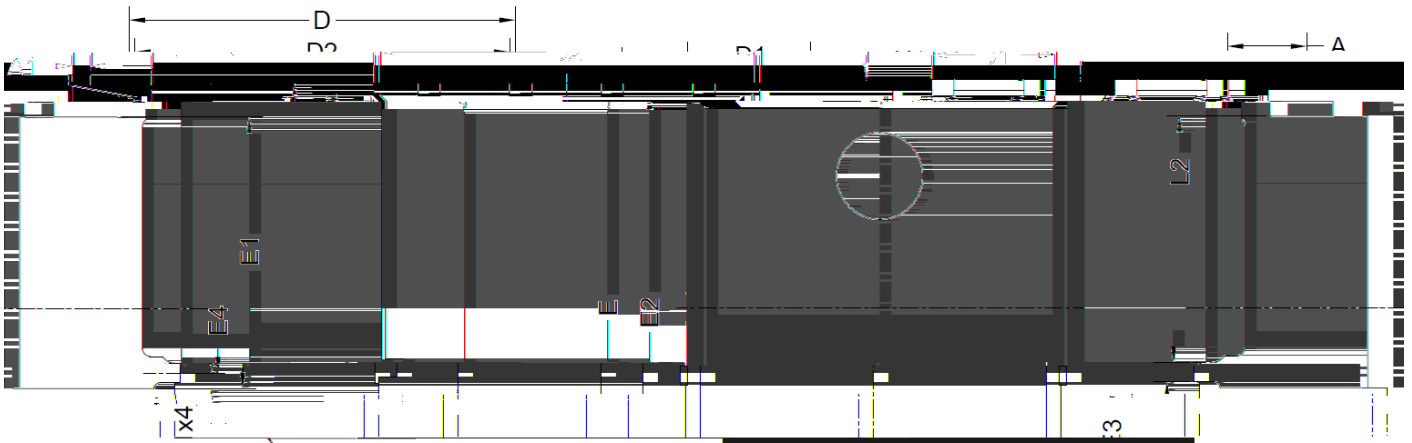


Figure 13.



PDFN5060-8L-E-1.1mm Package information



1.10	1.20
54 BSC	
	0.10
1.70	1.90
3.72	3.92
E 20	E 10

5.86	6.06
0.254REF	
0.21REF	
0.50 BSC	
1.27 BSC	

A	1.00	
A1		0.2
A2		
D1	1.50	
E1	3.52	
D2	2.50	

E2	5.66
E3	
E4	



### Disclaimer

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