30V Dual P-Channel Enhancement Mode MOSFET

Description

The PECN4803SR uses advanced trench technology to provide excellent $R_{DS(ON)}$, low gate charge and operation with gate voltages as low as 4. 5V. This device is suitable for use as a load switch or in PWM applications.

General Features

- V_{DS} =-30V，I_D =-5A
  $R_{DS(ON)}$(Typ.)=53mΩ @V_{GS}=-4.5V
  $R_{DS(ON)}$(Typ.)=41mΩ @V_{GS}=-10V
- High power and current handing capability
- Lead free product is acquired
- Surface mount package

Application

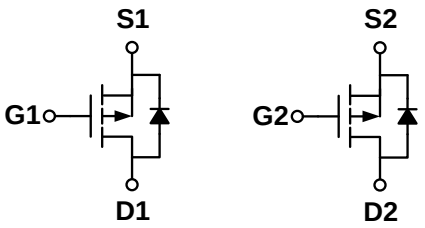
- PWM applications
- Load switch

100% UIS TESTED!
100% ΔVds TESTED!

Package

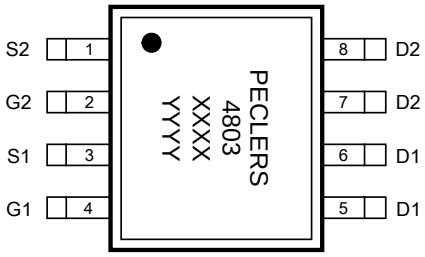
- SOP-8

Schematic diagram



Marking and pin assignment

SOP-8
(TOP VIEW)



Note：XXXX is the date code , YYYY is the Quality Code

Ordering Information

Part Number	Storage Temperature	Package	Devices Per Reel
PECN4803SR	-55°C to +150°C	SOP-8	4000

Absolute Maximum Ratings (TA=25℃ unless otherwise noted)

parameter		symbol	limit	unit
Drain-source voltage		V_{DS}	-30	V
Gate-source voltage		V_{GS}	±20	V
Drain Current-Continuous (Silicon Limited)	T_A=25°C	I_D	-5	A
	T_A=75°C		-4.2	
Pulsed Drain Current (Package Limited)		I_{DM}	-30	A
Maximum power dissipation	T_A=25°C	P_D	2	W
	T_A=75°C		1.3	
Operating junction Temperature range		Tj	-55—150	℃

Electrical Characteristics (TA=25℃ unless otherwise noted)

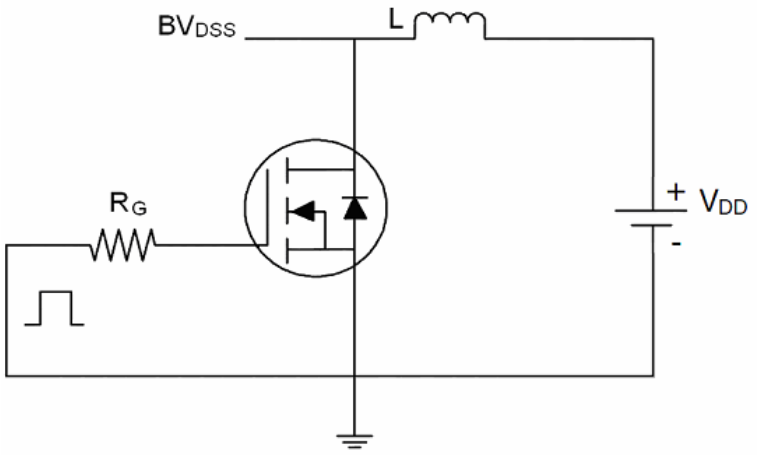
Parameter	Symbol	Condition	Min	Typ	Max	Unit
OFF Characteristics						
Drain-source breakdown voltage	BV_{DSS}	V_{GS}=0V, I_D=-250μA	-30	-	-	V
Zero gate voltage drain current	I_{DSS}	V_{DS}=-30V, V_{GS}=0V	-	-	1	μA
Gate-body leakage	I_{GSS}	V_{DS}=0V, V_{GS}=±20V	-	-	±100	nA
ON Characteristics						
Gate threshold voltage	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=-250μA	-0.7	-1.3	-2.0	V
Drain-source on-state resistance	$R_{DS(ON)}$	V_{GS}=-10V, I_D=-5A	-	41	52	mΩ
		V_{GS}=-4.5V, I_D=-4A	-	53	65	
Forward transconductance	gfs	V_{GS}=-5V, I_D=-5A	-	5	-	S
Dynamic Characteristics						
Input capacitance	C_{ISS}	V_{DS}=-15V ,V_{GS}=0V f=1.0MHz	-	530	-	pF
Output capacitance	C_{OSS}		-	100	-	
Reverse transfer capacitance	C_{RSS}		-	65	-	
Switching Characteristics						
Turn-on delay time	$t_{D(ON)}$	V_{DD}=-15V I_D=-5A V_{GEN}=-10V R_L=10ohm R_{GEN}=-6ohm	-	7.5	-	ns
Rise time	tr		-	5.5	-	
Turn-off delay time	$t_{D(OFF)}$		-	19	-	
Fall time	tf		-	7	-	
Total gate charge	Qg	V_{DS}=-15V,I_D=-5A V_{GS}=-10V	-	9.2	-	nC
Gate-source charge	Qgs		-	1.6	-	
Gate-drain charge	Qgd		-	2.2	-	

Thermal Characteristics

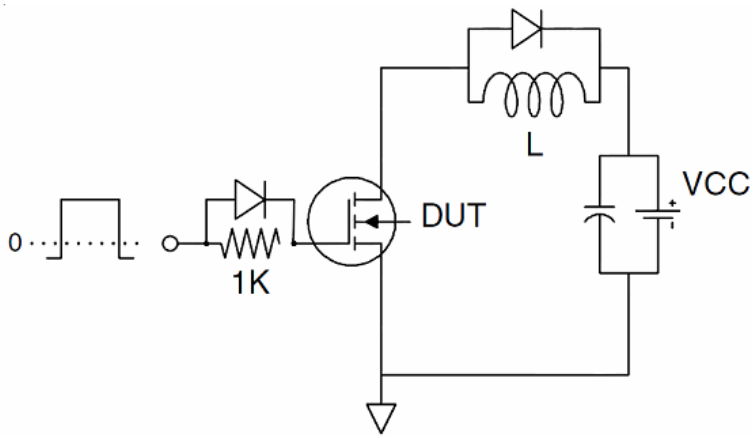
Thermal Resistance junction-to ambient	Rth JA	100	℃/W

Test Circuit：

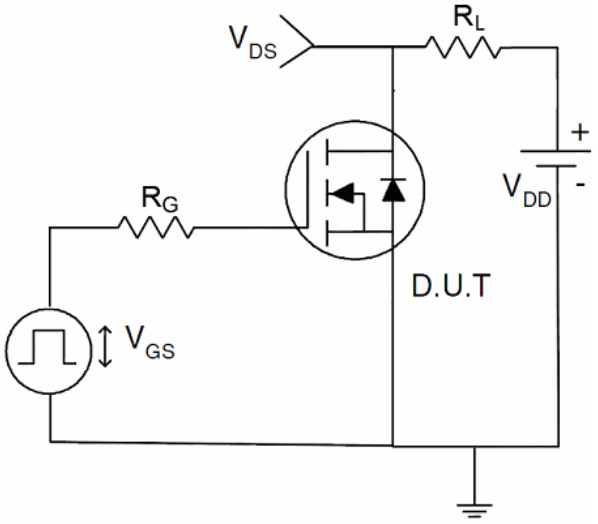
（1）、EAS Test Circuit



（2）、Gate Charge Test Circuit

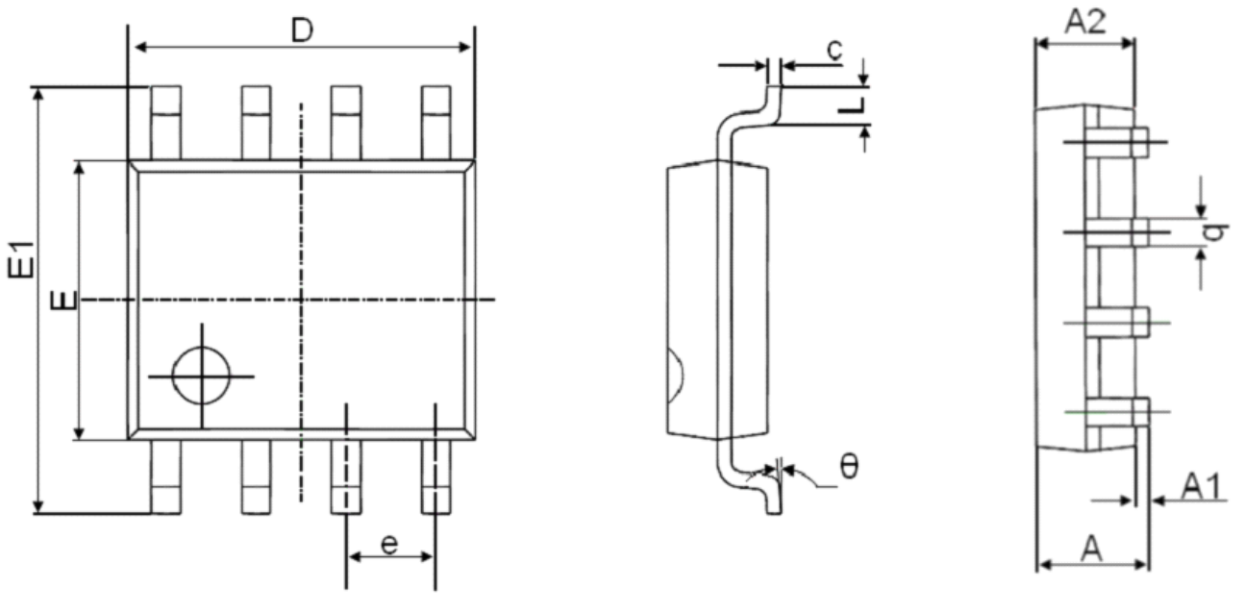


（3）、Switch Time Test Circuit



Package Information

- **SOP-8**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.006	0.010
D	4.700	5.100	0.185	0.200
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
e	1.270(BSC)		0.050(BSC)	
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°