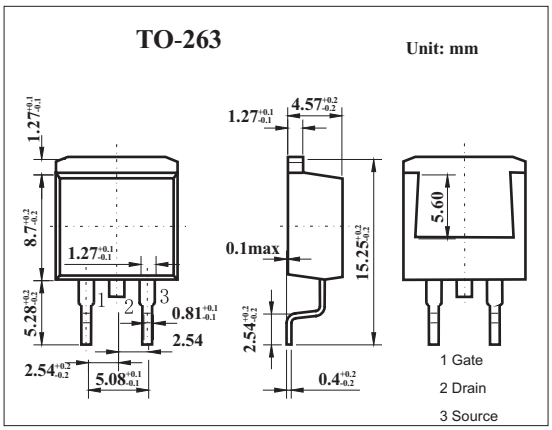
TY Semicondutor®

Product specification

2SK3433



■ Features

- Super low on-state resistance:
  $R_{DS(on)1}$ = 26mΩ MAX. (V_{GS} = 10 V, I_D = 42 A)
  $R_{DS(on)2}$ = 41 mΩ MAX. (V_{GS} = 4 V, I_D = 42 A)
- Low C_{iss}: C_{iss} =1500 pF TYP.
- Built-in gate protection diode

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DSS}	60	V
Gate to source voltage	V_{GSS}	±20	V
Drain current	I_D	±40	A
	I_{dp} *	±160	A
Power dissipation T_C=25℃	P_D	47	W
T_A=25℃		1.5	
Channel temperature	T_{ch}	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

* PW≤10μs,Duty Cycle≤1%

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain cut-off current	I_{DSS}	V_{DS}=60V,V_{GS}=0			10	μA
Gate leakage current	I_{GSS}	V_{GS}=±20V,V_{DS}=0			±10	μA
Gat cutoff voltage	$V_{GS(off)}$	V_{DS}=10V,I_D=1mA	1.5	2.0	2.5	V
Forward transfer admittance	$\|Y_{fs}\|$	V_{DS}=10V,I_D=20A	11	22		S
Drain to source on-state resistance	$R_{DS(on)1}$	V_{GS}=10V,I_D=20A		22	26	mΩ
	$R_{DS(on)2}$	V_{GS}=4V,I_D=20A		29	41	mΩ
Input capacitance	C_{iss}	V_{DS}=10V,V_{GS}=0,f=1MHZ		1500		pF
Output capacitance	C_{oss}			250		pF
Reverse transfer capacitance	C_{rss}			120		pF
Turn-on delay time	t_{on}	I_D=20A,$V_{GS(on)}$=10V,R_G=10Ω,V_{DD}=30V		35		ns
Rise time	t_r			320		ns
Turn-off delay time	t_{off}			89		ns
Fall time	tf			120		ns
Total Gate Charge	Q_G	I_D =40A, V_{DD} =48V, V_{GS} = 10 V		30		nC
Gate to Source Charge	Q_{GS}			5		nC
Gate to Drain Charge	Q_{GD}			8		nC