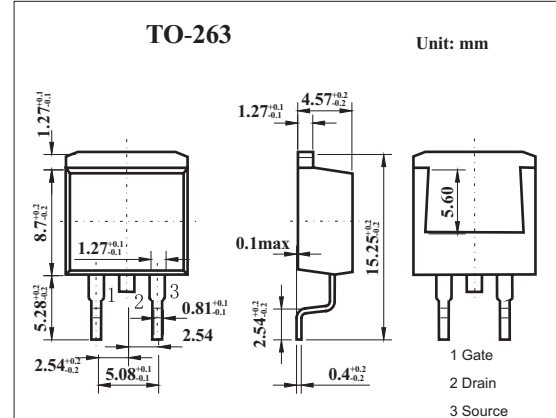


## MOS Field Effect Transistor 2SK3458

### ■ Features

- Low gate charge  
Q<sub>G</sub> = 25 nC TYP. (V<sub>DD</sub> = 450 V, V<sub>GS</sub> = 10 V, I<sub>D</sub> = 6.0 A)
- Gate voltage rating ±30 V
- Low on-state resistance  
R<sub>DS(on)</sub> = 2.2 Ω MAX. (V<sub>GS</sub> = 10 V, I<sub>D</sub> = 3.0 A)
- Avalanche capability ratings
- Surface mount package available



### ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit	
Drain to source voltage	V <sub>DSS</sub>	800	V	
Gate to source voltage	V <sub>GSS</sub>	±30	V	
Drain current	I <sub>D</sub>	±6.0	A	
	I <sub>DP</sub> *	±24	A	
Power dissipation	P <sub>D</sub>	T <sub>C</sub> =25°C	100	W
		T <sub>A</sub> =25°C	1.5	
Channel temperature	T <sub>ch</sub>	150	°C	
Storage temperature	T <sub>stg</sub>	-55 to +150	°C	

\* PW ≤ 10 μs, Duty Cycle ≤ 1%

### ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Drain cut-off current	I <sub>DSS</sub>	V <sub>DS</sub> =800V, V <sub>GS</sub> =0			100	μA	
Gate leakage current	I <sub>GSS</sub>	V <sub>GS</sub> = ±30V, V <sub>DS</sub> =0			±100	μA	
Gate cutoff voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =1mA	2.5		3.5	V	
Forward transfer admittance	Y <sub>fs</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =3.0A	2.0			S	
Drain to source on-state resistance	R <sub>DS(on)1</sub>	V <sub>GS</sub> =10V, I <sub>D</sub> =3.0A		1.8	2.2	Ω	
Input capacitance	C <sub>iss</sub>	V <sub>DS</sub> =10V, V <sub>GS</sub> =0, f=1MHZ		1220		pF	
Output capacitance	C <sub>oss</sub>				170		pF
Reverse transfer capacitance	C <sub>rss</sub>				16		pF
Turn-on delay time	t <sub>on</sub>	I <sub>D</sub> =3.0A, V <sub>GS(on)</sub> =10V, R <sub>G</sub> =10Ω, V <sub>DD</sub> =150V		17		ns	
Rise time	t <sub>r</sub>				7		ns
Turn-off delay time	t <sub>off</sub>				43		ns
Fall time	t <sub>f</sub>				11		ns
Total Gate Charge	Q <sub>G</sub>				25		nC
Gate to Source Charge	Q <sub>GS</sub>	I <sub>D</sub> = 6.0A, V <sub>DD</sub> = 450V, V <sub>GS</sub> = 10 V		6		nC	
Gate to Drain Charge	Q <sub>GD</sub>				10		nC