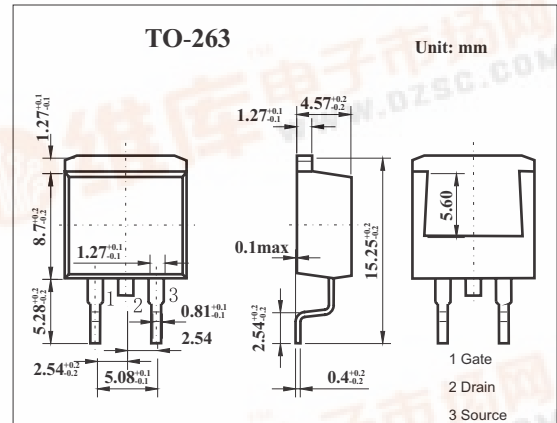


SMD Type MOSFET

MOS Field Effect Transistor
2SK3575

Features

- 4.5V drive available.
- Low on-state resistance,
RDS(on)1 = 4.5mΩ MAX. (VGS = 10 V, ID = 42A)
- Low gate charge
QG = 70nC TYP. (VDD = 24 V, VGS = 10 V, ID = 83 A)
- Built-in gate protection diode
- Surface mount device available



Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Drain to source voltage	V _{DSS}	30	V
Gate to source voltage	V _{GSS}	±20	V
Drain current	I _D	±83	A
	I _{DP} *	±332	A
Power dissipation	P _D	T _C =25°C	105
		T _A =25°C	1.5
Channel temperature	T _{ch}	150	°C
Storage temperature	T _{stg}	-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 _{DSS}	V _{Ds} =30V, V _{Gs} =0			10	μA	
Gate leakage current	I _{GSS}	V _{Gs} =±20V, V _{Ds} =0			±100	μA	
Gate cut off voltage	V _{Gs(off)}	V _{Ds} =10V, I _D =1mA	1.5		2.5	V	
Forward transfer admittance	Y _{fs}	V _{Ds} =10V, I _D =42A	27			S	
Drain to source on-state resistance	R _{DS(on)1}	V _{Gs} =10V, I _D =42A		3.3	4.5	mΩ	
	R _{DS(on)2}	V _{Gs} =4.5V, I _D =42A		4.3	6.4	mΩ	
Input capacitance	C _{iss}	V _{Ds} =10V, V _{Gs} =0, f=1MHZ		3700		pF	
Output capacitance	C _{oss}			1430		pF	
Reverse transfer capacitance	C _{rss}			500		pF	
Turn-on delay time	t _{on}		I _D =42A, V _{Gs(on)} =10V, R _G =10Ω, V _{DD} =15V		26		ns
Rise time	t _r				27		ns
Turn-off delay time	t _{off}				110		ns
Fall time	t _f				40		ns
Total Gate Charge	Q _G	V _{DD} = 24V		70		nC	
Gate to Source Charge	Q _{GS}	V _{Gs} = 10 V		12		nC	
Gate to Drain Charge	Q _{GD}	I _D = 83A		20		nC	

