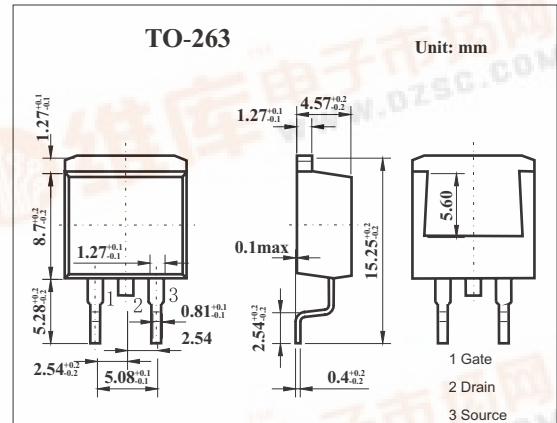


SMD Type MOSFET

MOS Field Effect Transistor 2SK3899



Features

- Low On-state resistance
 $R_{DS(on)1} = 5.3m\Omega \text{ MAX. } (V_{GS} = 10 \text{ V, } I_D = 42 \text{ A})$
 $R_{DS(on)2} = 6.5 \text{ m}\Omega \text{ MAX. } (V_{GS} = 4.5 \text{ V, } I_D = 42 \text{ A})$
- Low C_{iss} : $C_{iss} = 5500 \text{ pF TYP.}$

Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DSS}	60	V
Gate to source voltage	V_{GSS}	± 20	V
Drain current	I_D	± 84	A
	I_{DP}^*	± 336	A
Power dissipation	P_D	$T_A=25^\circ\text{C}$	1.5
		$T_C=25^\circ\text{C}$	146
Channel temperature	T_{ch}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

* $PW \leq 10 \mu\text{s, Duty Cycle} \leq 1\%$

Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain cut-off current	I_{DSS}	$V_{DS}=60\text{V, } V_{GS}=0$			10	μA
Gate leakage current	I_{GSS}	$V_{GS}=\pm 20\text{V, } V_{DS}=0$			± 10	μA
Gate cut off voltage	$V_{GS(off)}$	$V_{DS}=10\text{V, } I_D=1\text{mA}$	1.5	2.0	2.5	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=10\text{V, } I_D=42\text{A}$	35	70		S
Drain to source on-state resistance	$R_{DS(on)1}$	$V_{GS}=10\text{V, } I_D=42\text{A}$		4.2	5.3	m Ω
	$R_{DS(on)2}$	$V_{GS}=4.5\text{V, } I_D=42\text{A}$		4.9	6.5	m Ω
Input capacitance	C_{iss}			5500		pF
Output capacitance	C_{oss}	$V_{DS}=10\text{V, } V_{GS}=0, f=1\text{MHZ}$		1050		pF
Reverse transfer capacitance	C_{rss}			350		pF
Turn-on delay time	t_{on}	$I_D=42\text{A, } V_{GS(on)}=10\text{V, } R_G=0 \Omega, V_{DD}=30\text{V}$		19		ns
Rise time	t_r		13		ns	
Turn-off delay time	t_{off}		91		ns	
Fall time	t_f		10		ns	
Total Gate Charge	Q_G		$V_{DD} = 48\text{V}$		96	
Gate to Source Charge	Q_{GS}	$V_{GS} = 10 \text{ V}$		18		nC
Gate to Drain Charge	Q_{GD}	$I_D = 84\text{A}$		23.5		nC

