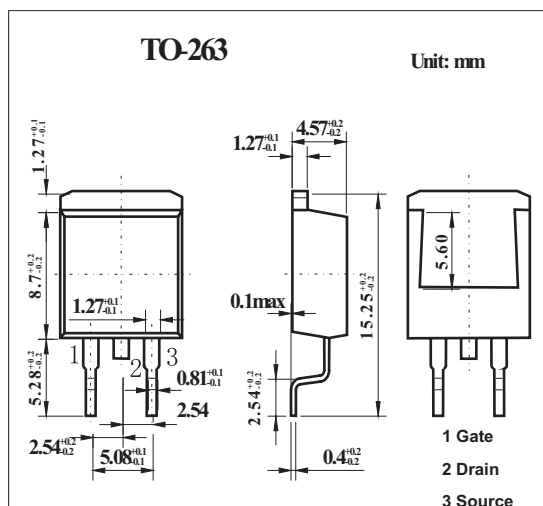


Silicon N-channel Power MOSFET

2SK3636

■ Features

- Avalanche energy capacity guaranteed: $EAS > 20$ mJ
- Gate-source surrender voltage $V_{GSS} = \pm 30$ V guaranteed
- High-speed switching: $t_r = 50$ ns
- No secondary breakdown

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

Parameter	Symbol	Rating	Unit
Drain-source surrender voltage	V_{DSS}	800	V
Gate-source surrender voltage	V_{GSS}	± 30	V
Drain current	I_D	± 3	A
Peak drain current	I_{DP}	± 6	A
Avalanche energy capability	EAS	20	mJ
Power dissipation $T_a = 25^\circ\text{C}$	P_D	2	W
Power dissipation		35	
Channel temperature	T_{ch}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

2SK3636

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Gate-drain surrender voltage	V _{DSS}	I _D = 1 mA, V _{GS} = 0	800			V
Drain-source cutoff current	I _{DSS}	V _{DS} = 640 V, V _{GS} = 0			100	μA
Gate-source cutoff current ^t	I _{GSS}	V _{GS} = ±30 V, V _{DS} = 0			±1	μA
Gate threshold voltage	V _{th}	V _{DS} = 25 V, I _D = 1 mA	2.0		5.0	V
Forward transfer admittance *	Y _{fs}	V _{DS} = 25 V, I _D = 2 mA	1.5	2.4		V
Drain-source on resistance *	R _{DS(on)}	V _{GS} = 10 V, I _D = 2 mA		3.2	4.0	Ω
Diode forward voltage *	V _{DSF}	I _{DR} = 3 A, V _{GS} = 0			-1.6	V
Short-circuit forward transfer capacitance	C _{iss}	V _{DS} = 10 V, V _{GS} = 0, f = 1 MHz		730		pF
Short-circuit output capacitance	C _{oss}			90		pF
Reverse transfer capacitance	C _{rss}			40		pF
Turn-on delay time	t _{d(on)}	V _{DD} = 200 V, I _D = 2 A, R _L = 100 Ω, V _{GS} = 10 V		35		ns
Rise time	t _r			60		ns
Fall time	t _f			50		ns
Turn-off delay time	t _{d(off)}			160		ns
Thermal resistance (ch-c)	R _{th(ch-c)}				3.6	°C/W
Thermal resistance (ch-a)	R _{th(ch-a)}				62.5	°C/W

* Pulse measurement