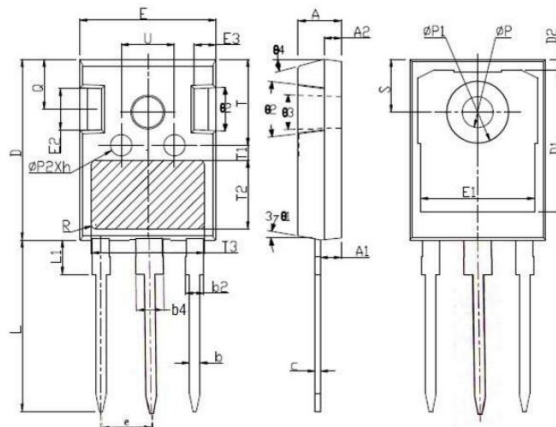
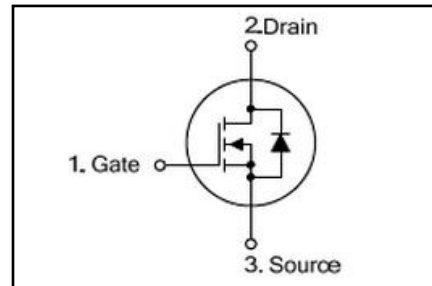


◆ **Features:**

- ◇ Very Low FOM $R_{DS(on)}$
低内阻
- ◇ %100 avalanche tested
%100 雪崩能量测试
- ◇ RoHS compliant
RoHS 认证
- ◇ Improved dv/dt capability, high ruggedness
提高 dv/dt 能力, 高耐用性

◆ **Applications**

- ◇ High efficiency switch mode power supplies
高效率开关电源
- ◇ Power factor correction
功率因数校正
- ◇ Electronic lamp ballast
电子整流器



Symbol	Min	Nom	Max	Symbol	Min	Nom	Max
A	4.9	5.0	5.1	e		5.44BSC	
A1	2.3	2.4	2.5	h	0.05	0.10	0.15
A2	1.9	2.0	2.1	L	19.6	19.9	20.2
b	1.10	1.20	1.25	L1			4.3
b2	1.90	2.00	2.25	Φ p	3.5	3.6	3.75
b4	2.90	3.00	3.25	Φ p1			7.3
c	0.50	0.60	0.70	Φ p2	2.4	2.5	2.6
D	20.8	21.0	21.2	Q	5.3		5.9
D1	16.25	16.55	16.85	S		6.15BSC	
D2	1.05	1.20	1.35	T	9.8		10.2
E	15.6	15.8	16.0	T1		1.65REF	
E1	13.1	13.3	13.5	T2		8.0REF	
E2	4.9	5.0	5.1	T3		12.8REF	
E3	2.4	2.5	2.6	U	6.0		6.4
单位		mm		型号		TO-247G	

◆ Absolute Maximum Ratings (Tc=25°C)

Symbol	Parameters	Ratings	Unit
V _{DSS}	Drain-Source Voltage 漏源电压	600	V
V _{GS}	Gate-Source Voltage-Continuous 栅源电压	±30	V
I _D	Drain Current-Continuous (Note 2) 漏极持续电流	38.8	A
I _{DM}	Drain Current-Single Plused (Note 1) 漏极单次脉冲电流	155	A
P _D	Power Dissipation (Note 2) 功率损耗	270	W
T _j	Max.Operating junction temperature 最大结温	150	°C

Symbol	Parameters	Min	Typ	Max	Units	Conditions
Static Characteristics						
B _{VDSS}	Drain-Source Breakdown Voltage Current (Note 1) 漏极击穿电压	600	--	--	V	I _D =250μA, V _{GS} =0V, T _J =25°C
V _{GS(th)}	Gate Threshold Voltage 栅极开启电压	2.5	--	4.5	V	V _{DS} =V _{GS} , I _D =250μA
R _{DS(on)}	Drain-Source On-Resistance 漏源导通电阻	--	0.055	0.065	Ω	V _{GS} =10V, I _D =19.4A
I _{GSS}	Gate-Body Leakage Current 栅极漏电流	--	--	±100	nA	V _{GS} =±30V, V _{DS} =0
I _{DSS}	Zero Gate Voltage Drain Current 零栅极电压漏极电流	--	--	1	μA	V _{DS} =600V, V _{GS} =0
Switching Characteristics						



TK39N60W-OSEN

600V Super-Junction Power MOSFET

$T_{d(on)}$	Turn-On Delay Time 开启延迟时间	--	87	--	ns	$V_{DS}=400V, I_D=19.4A$ $R_G=10\Omega$
T_r	Rise Time 上升时间	--	55	--	ns	
$T_{d(off)}$	Turn-Off Delay Time 关闭延迟时间	--	221	--	ns	
T_f	Fall Time 下降时间	--	13	--	ns	
Q_g	Total Gate Charge 栅极总电荷	--	121	--	nC	$V_{DS}=400V, V_{GS}=15V$ $I_D=38.8A$
Q_{gs}	Gate-Source Charge 栅源极电荷	--	24	--	nC	
Q_{gd}	Gate-Drain Charge 栅漏极电荷	--	56	--	nC	
Dynamic Characteristics						
C_{iss}	Input Capacitance 输入电容	--	5100	--	pF	$V_{DS}=50V, V_{GS}=0$ $f=1MHz$
C_{oss}	Output Capacitance 输出电容	--	114	--	pF	
C_{rss}	Reverse Transfer Capacitance 反向传输电容	--	15	--	pF	
I_S	Continuous Drain-Source Diode Forward Current 二极管导通正向持续电流	--	--	38.8	A	
V_{SD}	Diode Forward On-Voltage 二极管正向导通电压	--	--	1.3	V	$I_S=30A, V_{GS}=0$
$R_{th(j-c)}$	Thermal Resistance, Junction to Case 结到外壳的热阻	--	--	0.463	$^{\circ}C/W$	

Note 1: Repetitive Rating : Pulse width limited by maximum junction temperature

Note 2: Pulse test: PW \leq 300us , duty cycle \leq 2%.