

40V,240A N-Channel MOSFET

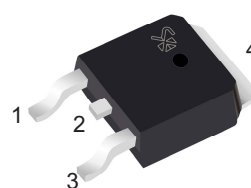
DESCRIPTION

- Proprietary New Trench Technology
- LowGate Charge Minimize Switching Loss
- Fast Recovery Body Diode

FEATURES

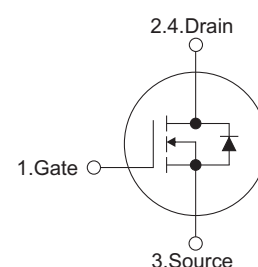
- $BV_{DSS} \geq 40V$
- $I_D = 240A$
- $R_{DS(ON)} \leq 3.3m\Omega @ V_{GS}=10V$

BV_{DSS}	$R_{DS(ON),typ.}$	I_D
40V	3.3m Ω	240A



TO-252

Package No to Scale



Application

- High efficiency DC/DC Converters
- Synchronous Rectification
- UPS Inverter

Ordering Information

Part Number	Package
SK240N04	TO-252

Absolute Maximum Ratings (T_c=25°C Unless Otherwise Noted)

Parameter	Symbol	Maximum Ratings	Unit
Drain-Source Voltage	V_{DS}	40	V
Gate-Source Voltage	V_{GS}	±20	V
Drain Current - Continues	I_D	240	A

Electrical Characteristic ($T_J=25^{\circ}\text{C}$ unless otherwise specified.)

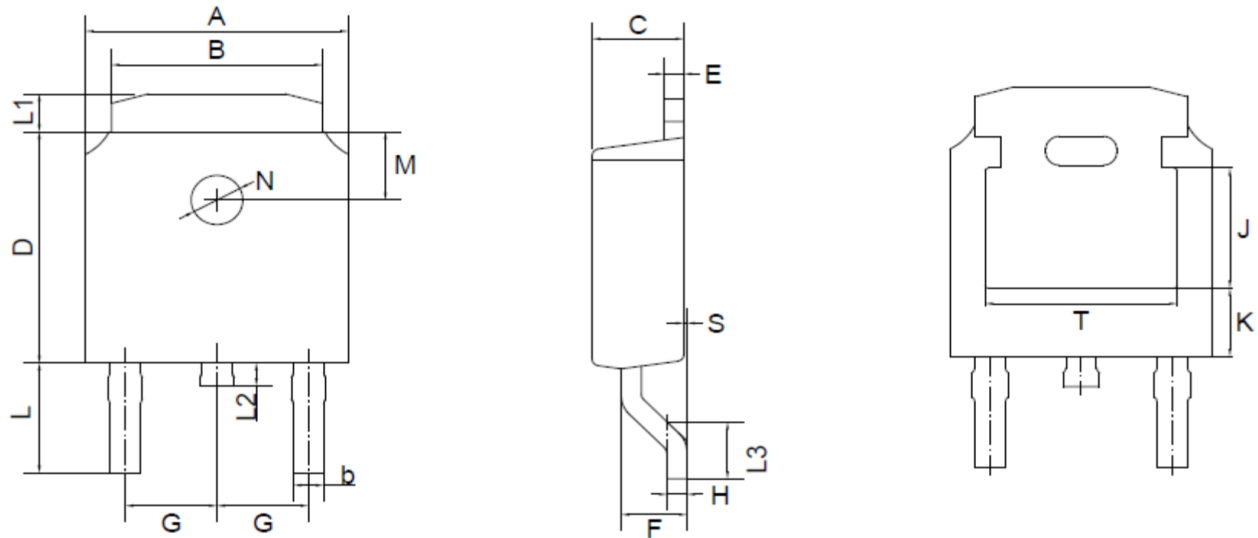
Parameter	Description	Min.	Typ.	Max.	Test Conditions	Unit
$V_{(BR)DSS}$	Drain-to-Source Breakdown Voltage	40	--	--	$V_{GS} = 0V, I_D = 250\mu A$	V
V_{GSS}	Gate-to-Source Voltage	--	--	± 20	NA	V
$R_{DS(on)}$	Static Drain-to-Source On-Resistance ^{[1] [2]}	--	--	3.3	$V_{GS} = 10V, I_D = 80A$	m Ω
$V_{GS(th)}$	Gate Threshold Voltage	2.0	--	4.0	$V_{DS} = V_{GS}, I_D = 250\mu A$	V
V_{SD}	Diode Forward Voltage	--	--	1.2	$I_S=80A, V_{GS}=0V$	V
I_{DSS}	Drain-to-Source Leakage Current	--	--	1	$V_{DS} = 40V, V_{GS} = 0V, T_J = 25^{\circ}\text{C}$	μA
I_{GSS}	Gate-to-Source Leakage Current	--	--	± 100	$V_{GS} = \pm 20V$	nA
T_J	Operating Junction and Storage	-55 $^{\circ}\text{C}$ to 150 $^{\circ}\text{C}$ Max.				$^{\circ}\text{C}$
T_{STG}	Temperature Range					

Note:

[1] Pulse width $\leq 380\mu s$; duty cycle $\leq 2\%$.

PACKAGE OUTLINE

TO-252(D-PAK)



TO-252(D-PAK) mechanical data

UNIT		A	B	b	C	D	E	F	G	H	L	L1	L2	L3	S	M	N	J	K	T
mm	max	6.7	5.5	0.8	2.5	6.3	0.6	1.8	2.29	0.55	3.1	1.2	1.0	1.75	0.1	1.8	1.3	3.16	1.80	4.83
	min	6.3	5.1	0.3	2.1	5.9	0.4	1.3	TYPICAL	0.45	2.7	0.8	0.6	1.40	0.0	TYPICAL	TYPICAL	ref.	ref.	ref.
mil	max	264	217	31	98	248	24	71	90	22	122	47	39	69	4	71	51	124	71	190
	min	248	201	12	83	232	16	51	TYPICAL	18	106	31	24	55	0	TYPICAL	TYPICAL	ref.	ref.	ref.