

Power Mosfet (P-Type 40V)

Features

Advanced trench cell design

High speed switch

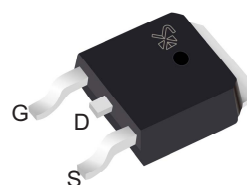
$BV \geq -40\text{ V}$

$R_{DS(ON)} \leq 15\text{ m}\Omega @ V_{GS} = -10\text{ V}$

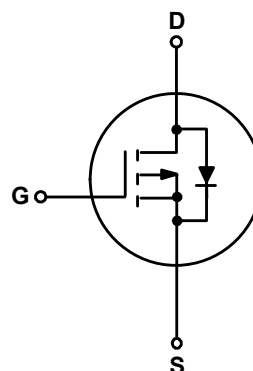
$R_{DS(ON)} \leq 21\text{ m}\Omega @ V_{GS} = -4.5\text{ V}$

BV_{DSS}	$R_{DS(ON),typ.}$	I_D
40V	12m Ω	22A

TO-252(D-PAK)



Symbol



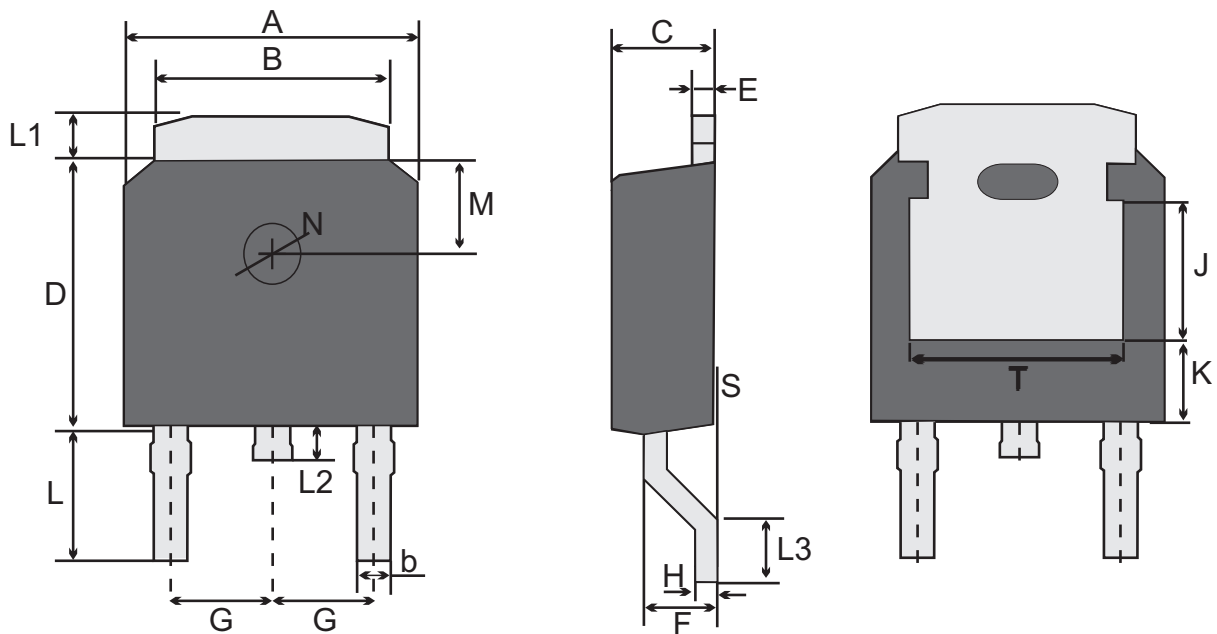
Limiting Values

Symbol	Parameter	Rating	Unit
V_{DSS}	Drain-Source Voltage	- 40	V
V_{GSS}	Gate-Source Voltage	± 20	
I_D	Continuous Drain Current	22	A
$T_J \& T_{STG}$	Operating and Storage Temperature Range	-55 to 150	$^{\circ}\text{C}$

● **Electrical Characteristics (Ta = 25 °C Unless Otherwise Noted)**

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
Static Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0 V, I _{DS} = - 250 μA	- 40	-	-	V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} , I _{DS} = - 250 μA	- 1.0	- 1.5	- 2.0	V
I _{DSS}	Drain Leakage Current	V _{DS} = - 32 V, V _{GS} = 0 V	-	-	- 1	μA
		T _J = 85 °C	-	-	- 30	μA
I _{GSS}	Gate Leakage Current	V _{GS} = ±20 V, V _{DS} = 0 V	-	-	± 100	nA
R _{DS(ON)} ^a	On-State Resistance	V _{GS} = - 10 V, I _{DS} = - 1 A	-	12	15	mΩ
		V _{GS} = - 4.5 V, I _{DS} = - 1 A	-	16	21	
Diode Characteristics						
V _{SD}	Diode Forward Voltage	I _{SD} = - 0.5 A, V _{GS} = 0V	-	-0.7	-1.3	V

TO-252(D-PAK) Package Outline Dimensions



TO-252W(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 TYPICAL	0.55	3.1	1.2	1.0	1.75	0.23	1.8 TYPICAL	1.3 TYPICAL	3.16 ref.	1.80 ref.	4.83 ref.
	typ	6.6	5.3	0.7	2.3	6.1	0.5	1.5		0.50	2.8	1.0	0.8	1.30	0.15					
	min	6.3	5.1	0.3	2.1	5.9	0.4	1.3		0.45	2.7	0.8	0.6	1.00	0.0					
mil	max	264	217	31	98	248	24	71	90 TYPICAL	22	122	47	39	69	9	71 TYPICAL	51 TYPICAL	124 ref.	71 ref.	190 ref.
	typ	260	209	28	90	240	20	59		20	110	39	31	51	6					
	min	248	201	12	83	232	16	51		18	106	31	24	55	0					