

TO-252 N

N-CHANNEL MOSFET in a TO-252 Plastic Package.

 $V_{DS} (V) = 100V$ $I_D = 37A$ ($V_{GS} = \pm 20V$)

 $R_{DS(ON)} @ 10V \leq 25mR$ (Typ. 20mR)

 $R_{DS(ON)} @ 4.5V \leq 35mR$ (Typ. 25mR)

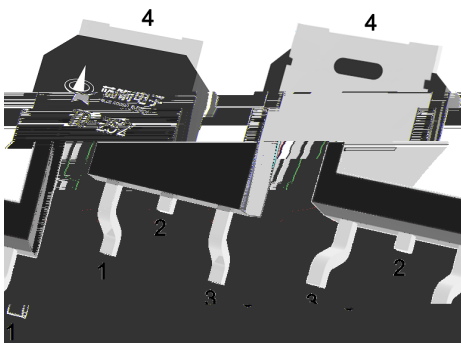
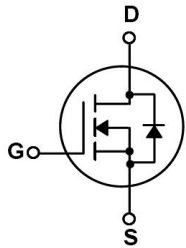
AEC-Q101

Qualified to AEC-Q101 Standards for High Reliability,

HF Product.

LED

Boost converters and synchronous rectifiers for consumer, telecom, industrial power supplies and LED backlighting, Meet the stringent requirements of automotive applications.



PIN1 G

PIN 2 D

PIN 3 S

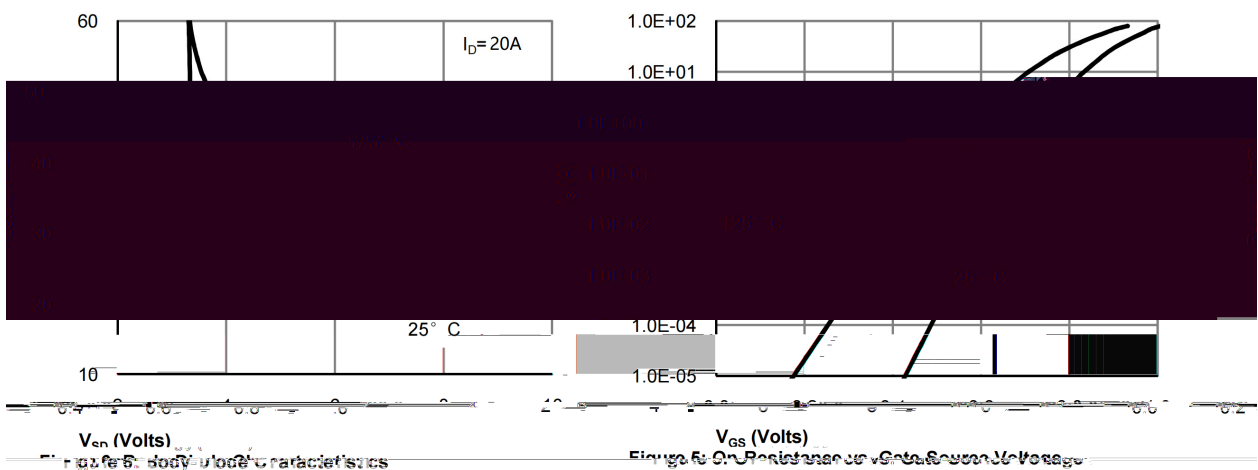
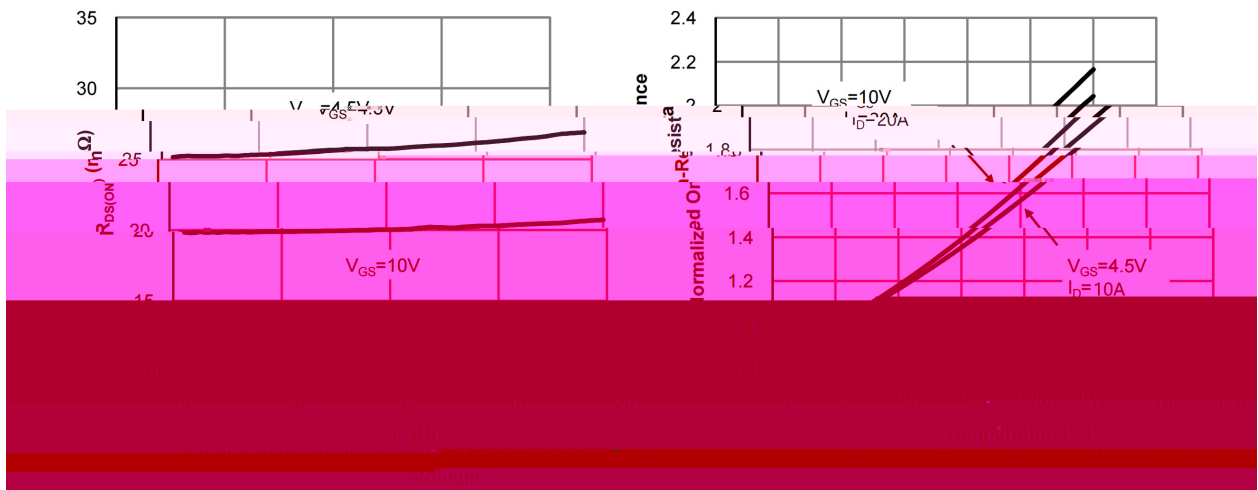
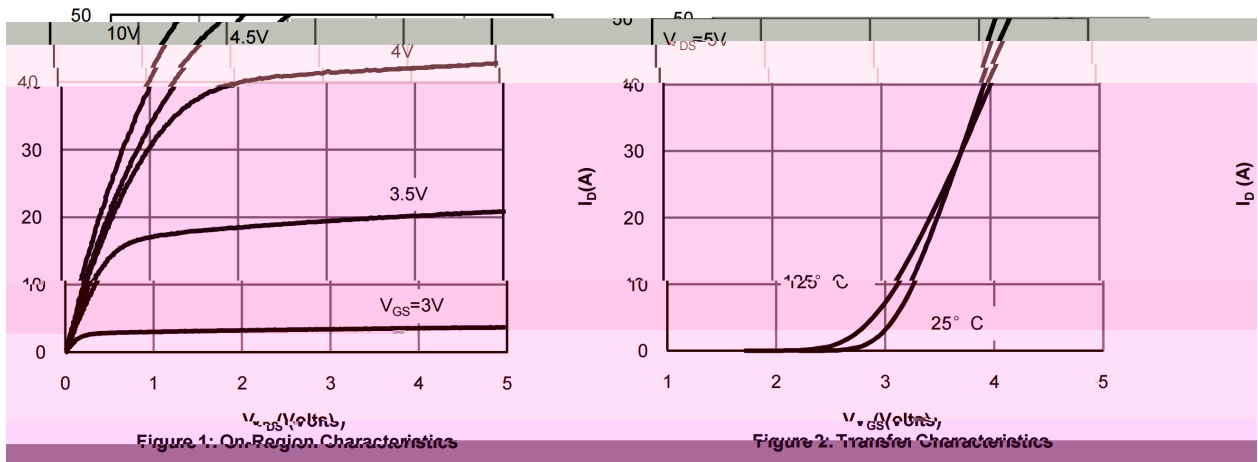
PIN 4 D

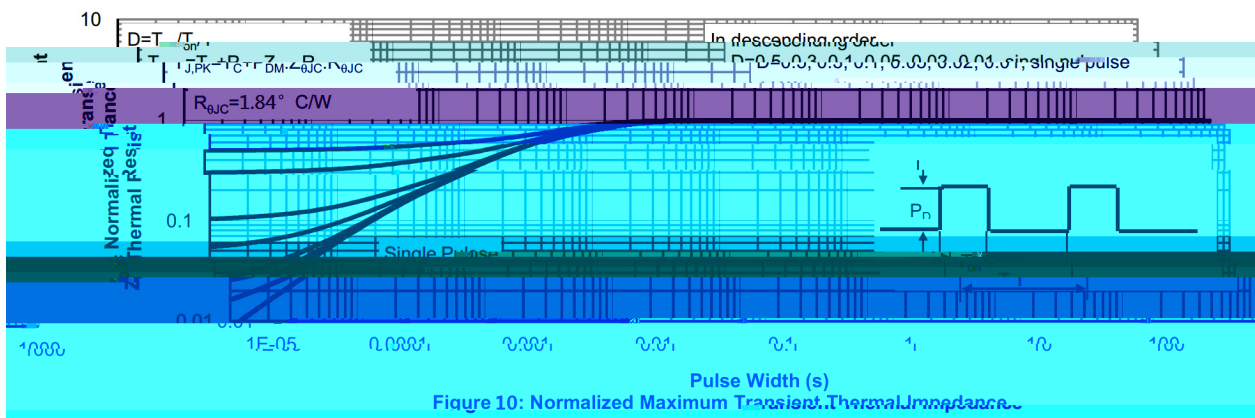
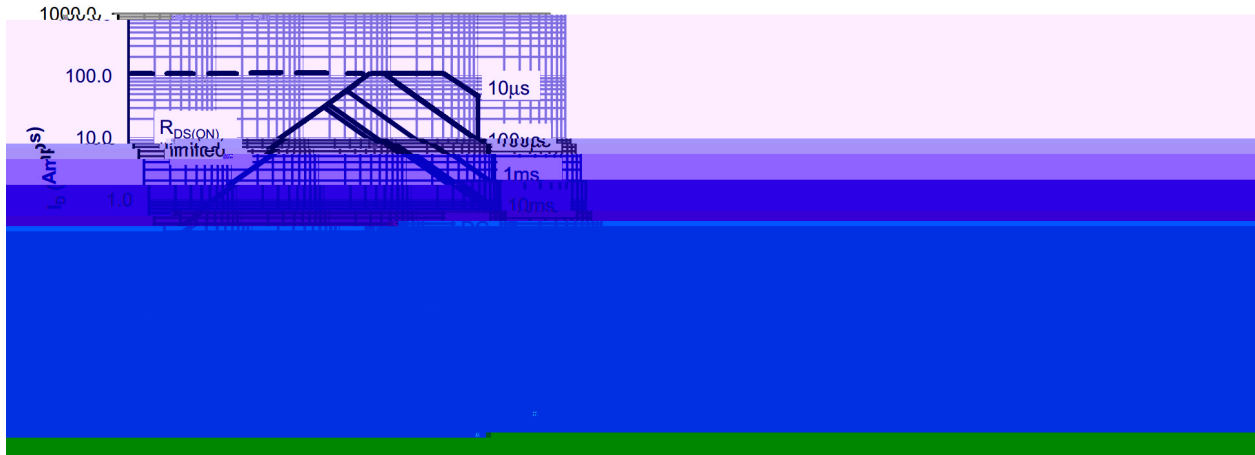
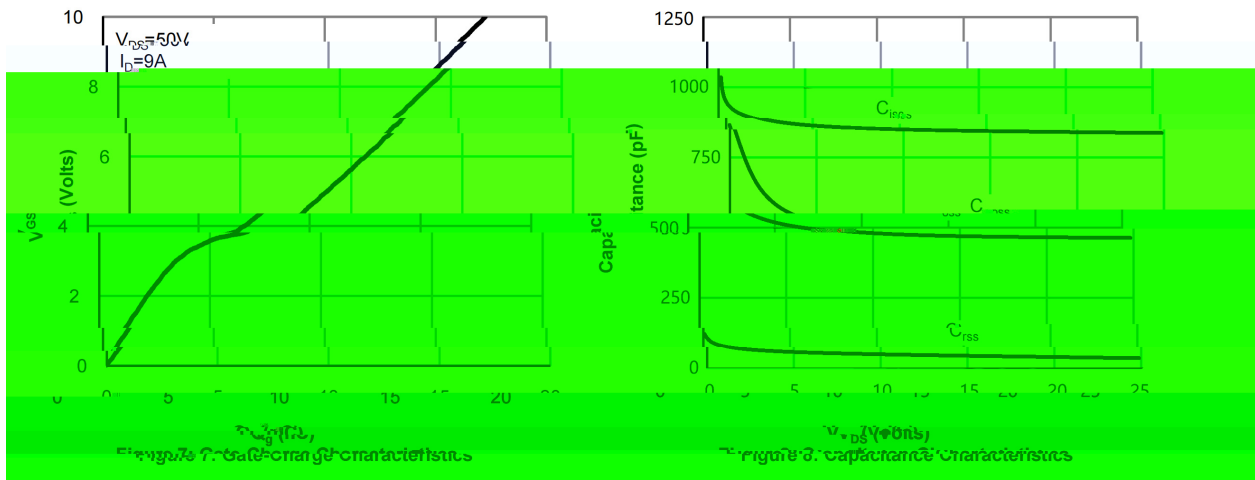
See Marking Instructions.

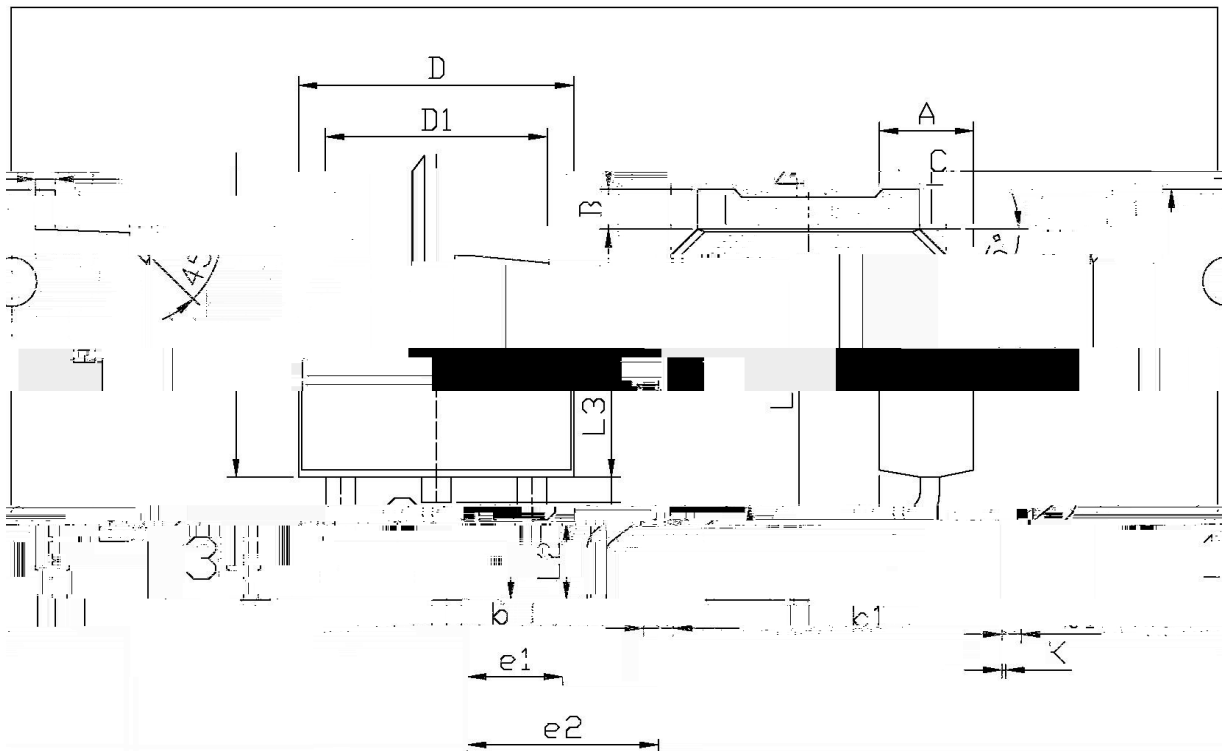
Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DSS}	100	V
Drain Current		$I_D(T_c=25^\circ\text{C})$	37	A
Drain Current - Pulsed		I_{DM}	117	A
Gate-Source Voltage		V_{GS}	± 20	V
Avalanche Current		I_{AS}	7	A
Single Pulsed Avalanche Energy		E_{AS}	14.4	mJ
Power Dissipation		$P_D(T_c=25^\circ\text{C})$	68	W
Storage Temperature Range		T_{stg}	-55 ~ 150	
Thermal Resistance-Junction to Ambient	$t \leq 10\text{s}$	$R_{\theta JA}$	20	/W
	Steady-State		50	
Thermal Resistance-Junction to Case	Steady-State	$R_{\theta JC}$	1.84	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250\mu A$	100	109		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=100V$ $V_{GS}=0V$			1	μA
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	1.0	1.6	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=20A$		20	25	m Ω
		$V_{GS}=4.5V$ $I_D=10A$		25	35	m Ω
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=1A$			1.2	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		820		pF
Output Capacitance	C_{oss}			475		
Reverse Transfer Capacitance	C_{rss}			35		
Gate resistance	R_g	$V_{GS}=0V$ $V_{DS}=0V$ $f=1MHz$		1.9		Ω
Total Gate Charge	$Q_{g(10V)}$	$V_{GS}=10V$ $V_{DS}=50V$ $I_D=9A$		17		nC
Total Gate Charge	$Q_{g(4.5V)}$			9		
Gate Source Charge	Q_{gs}			3		
Gate Drain Charge	Q_{gd}			3.5		

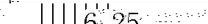
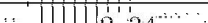
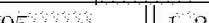
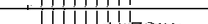
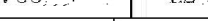
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	t					



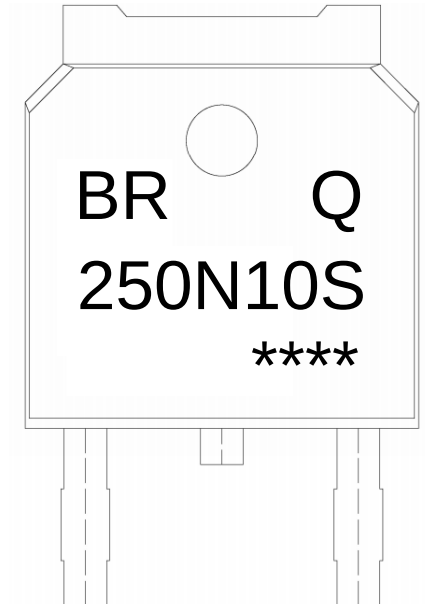




单位: mm

Symbol		Dimensions In Millimeters		Symbol		Dimensions In Millimeters	
		Min	Max			Min	Max
	A	6.25	2.20		B	2.40	5.95
	B	2.34	0.95		e	1.25	2.24
	C	3.72	0.70		D	0.60	4.42
	L1	10.35	0.45		L1	0.55	9.85
	L2	0.45	0.55		L2	1.70	2.00
	L3	0.60	0.90		L3	6.45	
	K	5.10	5.50		K	6.00	6.10

TO-252



BR

Q

250N10S

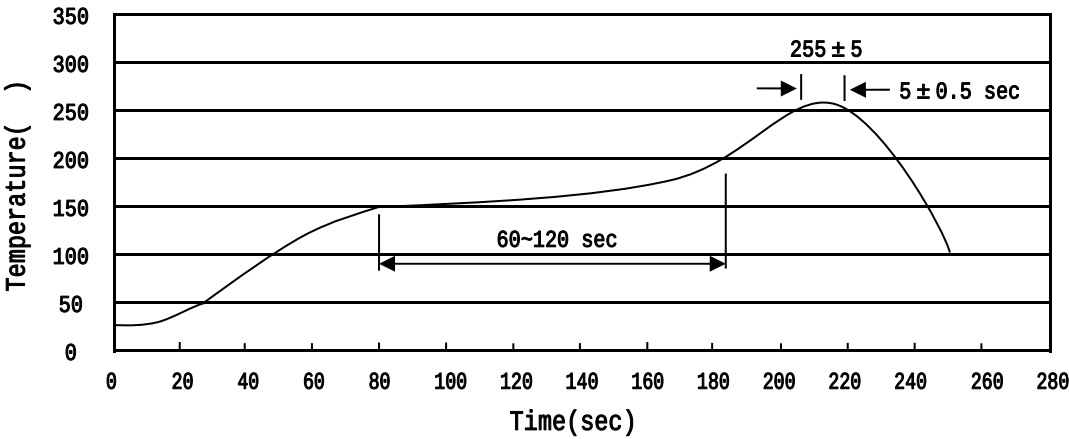
Note:

BR: Company Code

Q: Automobile halogen-free product Code

250N10S: Product Type Code

****: Lot No. Code, code change with Lot No



Note:

- 1

150 200

60 120sec;

1.Preheating:150~200 , Time:60~120sec.
- 2

255±5

5±0.5sec;

2.Peak Temp.:255±5 , Duration:5±0.5sec.
- 3

2 10 /sec.

3. Cooling Speed: 2~10 /sec.

260±5

10±1 sec.

Temp.:260±5

Time:10±1 sec

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
TO-252	2,500	2	5,000	6	30,000	13 ×16	360×360×50	380×335×366

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
	Units/Tube	Tubes/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Tube	Inner Box	Outer Box
TO-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180