TO-252 ᒷ P ۍ MOS ᒣ
P-CHANNEL MOSFET in a TO-252 Plastic Package.

UGV+rq, ڗ ɔ U Ḫ Fuvv ه ˥ AHF0T434 ݢ ، ᒪ
Low $R_{DS(on)}$,low gate charge, low C_{rss}

/ Absolute Maximum Ratings(Ta=25)

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	-60	V
Drain Current		I_D(Tc=25)	-50	A
Drain Current - Pulsed		I_{DM}	-200	A
Gate-Source Voltage		V_{GS}	±20	V
Power Dissipation		P_D(Tc=25)	85	W
Single Pulsed Avalanche Energy		E_{AS}	250	mJ
Avalanche Current(L=0.5mH)		I_{AS}	25	A
Junction and Storage Temperature Range		T_j, T_{stg}	-55 to 150	
Thermal resistance, junction - ambient	t ≤ 10s	$R_{\theta JA}$	25	/ W
	Steady-State		50	
Thermal resistance, junction - case	Steady-State	$R_{\theta JC}$	1.5	

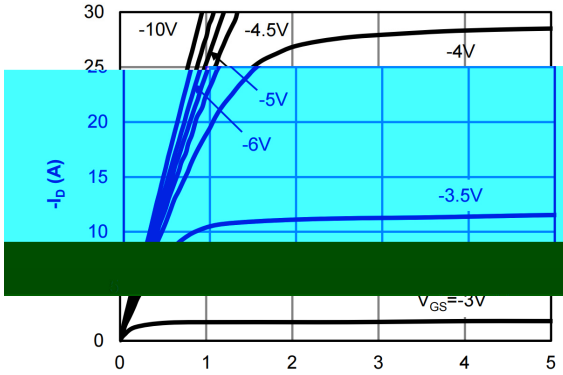
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=-250 A	-60	-68		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-60V V_{GS}=0V			-1.0	A
		V_{DS}=-48V T_C=150			-10	
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±20V V_{DS}=0V			±0.1	A
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=-250 A	-1	-1.6	-3	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=-10V I_D=-20A		30	35	m
	$R_{DS(on)}$	V_{GS}=-4.5V I_D=-10A		40	45	m
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V I_S=-1A			-1.2	V
Gate resistance	Rg			10		
Input Capacitance	C_{iss}	V_{DS}=-25V V_{GS}=0V f=1.0MHz		3200		pF
Output Capacitance	C_{oss}			800		pF
Reverse Transfer Capacitance	C_{rss}			270		pF
Total Gate Charge	$Q_{g(10V)}$	V_{GS}=-10V, V_{DS}=-30V, I_D=-20A		45		nC
Total Gate Charge	$Q_{g(4.5V)}$			23		
Gate Source Charge	Q_{gs}			9.3		
Gate Drain Charge	Q_{gd}			10.2		nC

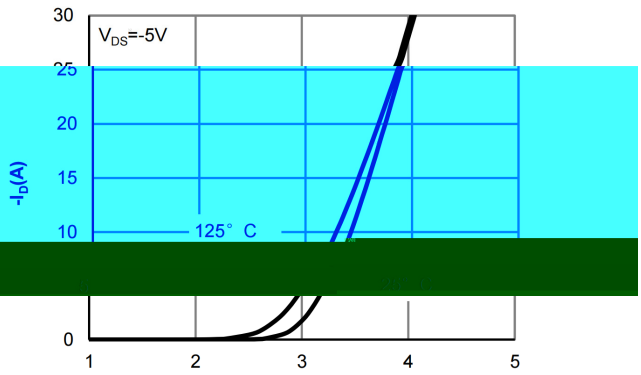
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	V_{GS}=-10V V_{DS}=-30V R_L=1.5 R_{GEN}=3Ω		12		ns
Turn-On Rise Time	t_r			14.5		
Turn-Off Delay Time	$t_{d(off)}$			38		
Turn-Off Fall Time	t_f			15		

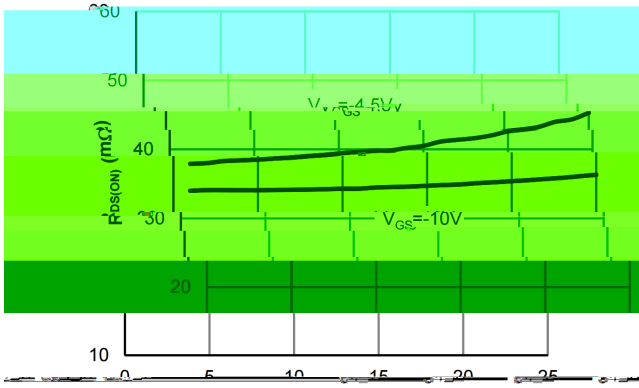
/ Electrical Characteristic Curve



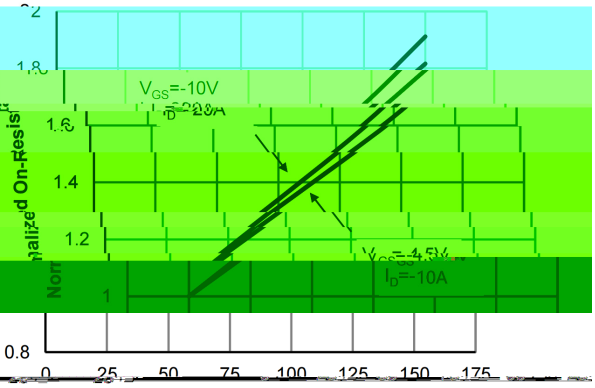
$-V_{DS}$ (Volts)
Figure 1: On-Region Characteristics



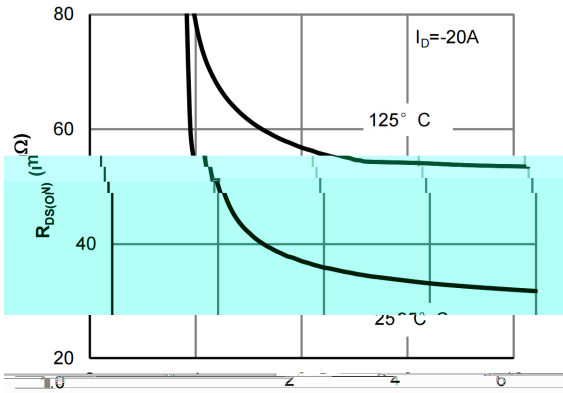
$-V_{GS}$(Volts)
Figure 2: Transfer Characteristics



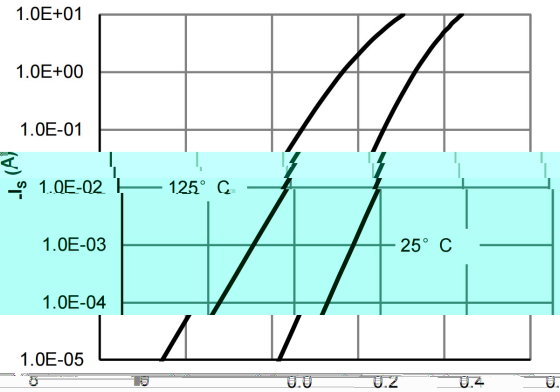
$-I_D$ (A)
Figure 3: On-Resistance vs. Drain Current and Gate Voltage



Temperature (°C)
Figure 4: On-Resistance vs. Junction

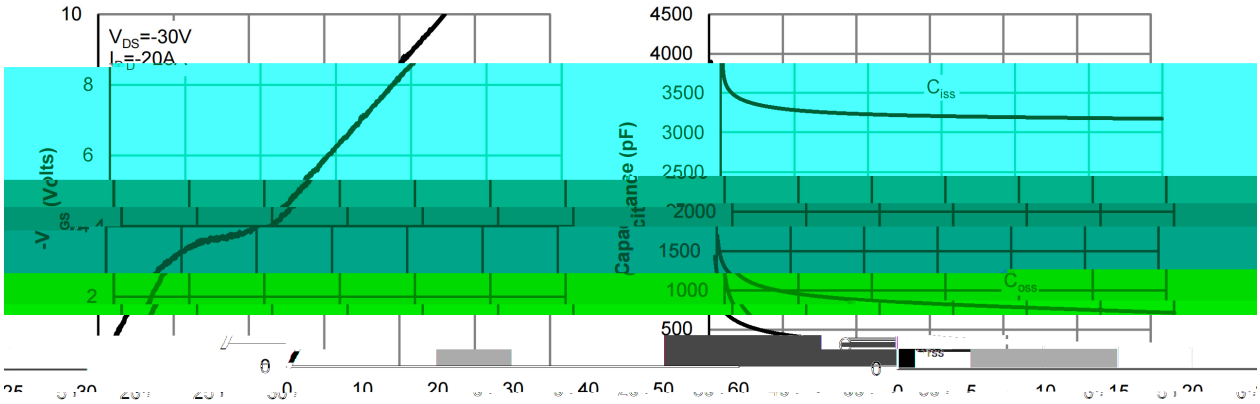


$-V_{SD}$ (Volts)



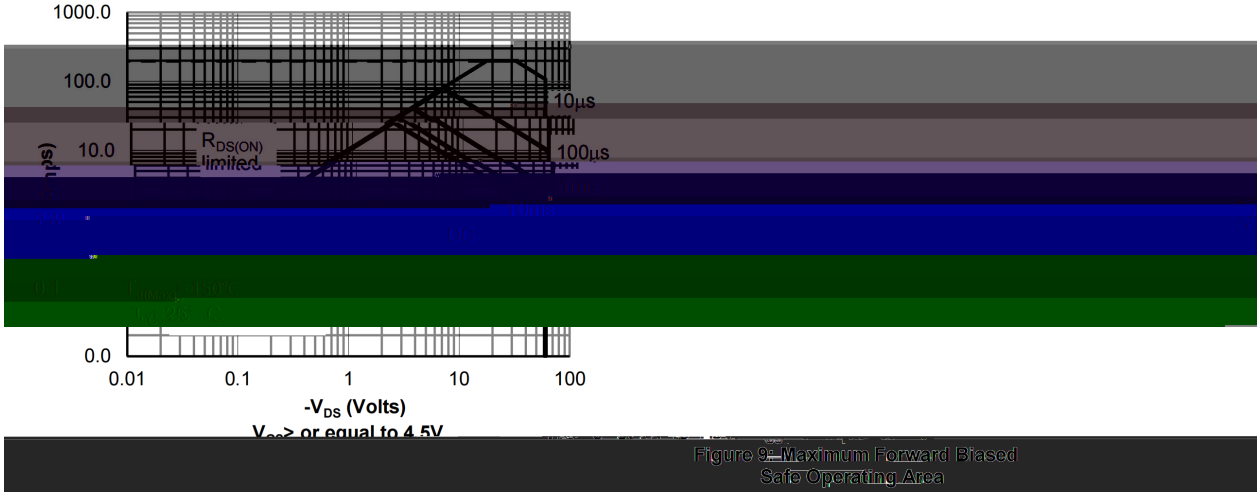
$-V_{GS}$ (Volts)

/ Electrical Characteristic Curve



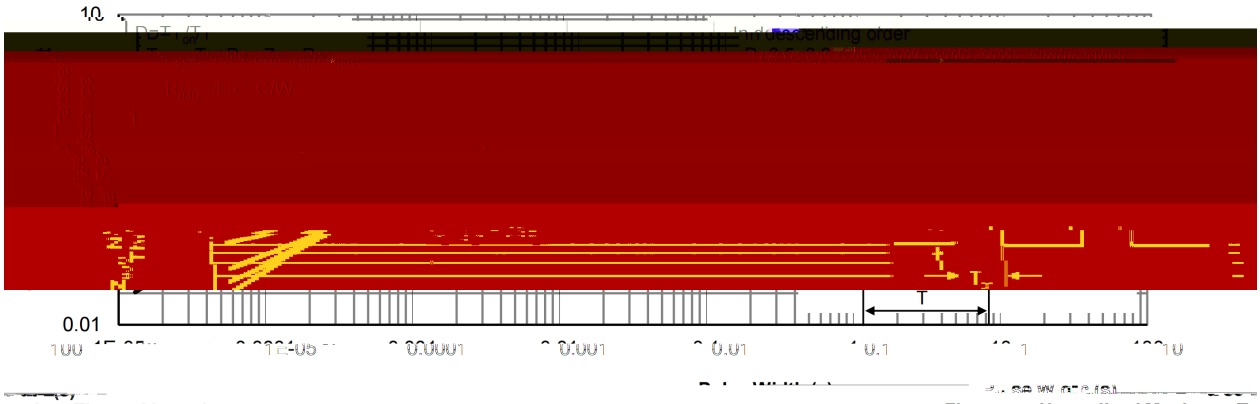
V_{DS} (Volts)

Q_g (nC)



V_{GS} or equal to 4.5V

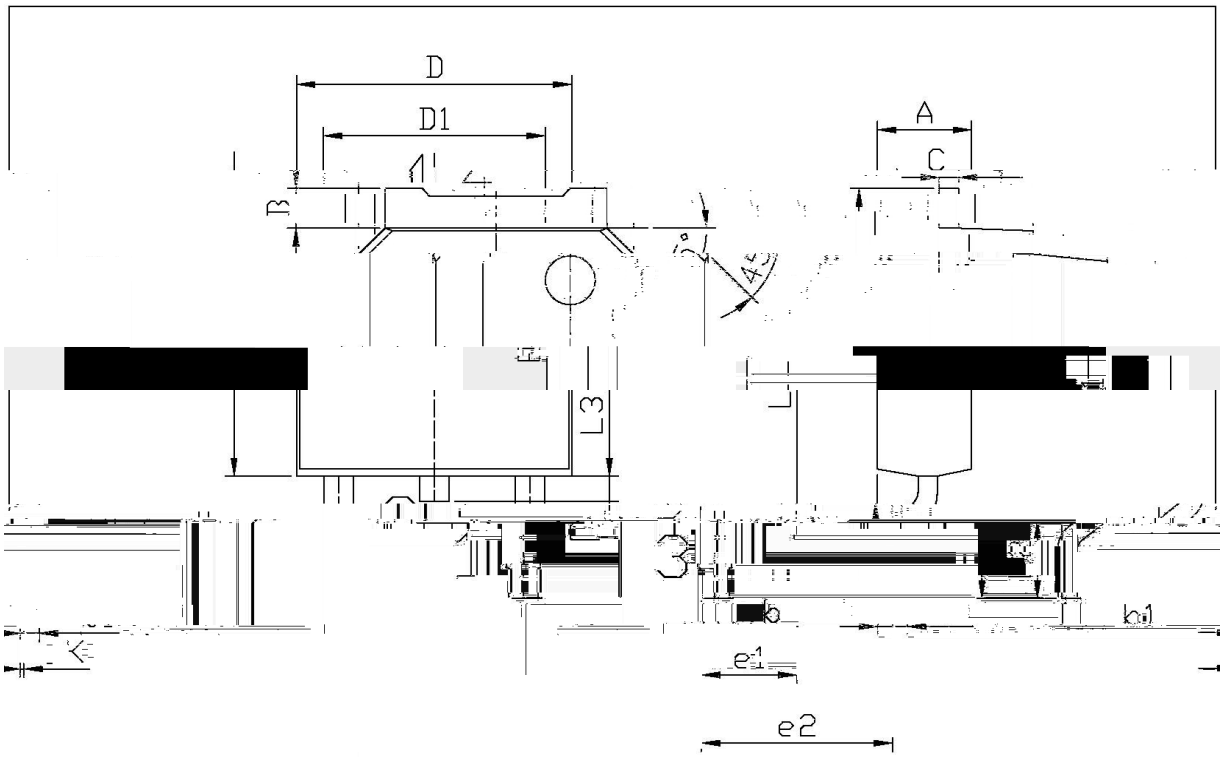
Figure 9: Maximum Forward Biased Safe Operating Area



ansient Thermal Impedance

Figure 10: Normalized Maximum Tr

/ Package Dimensions

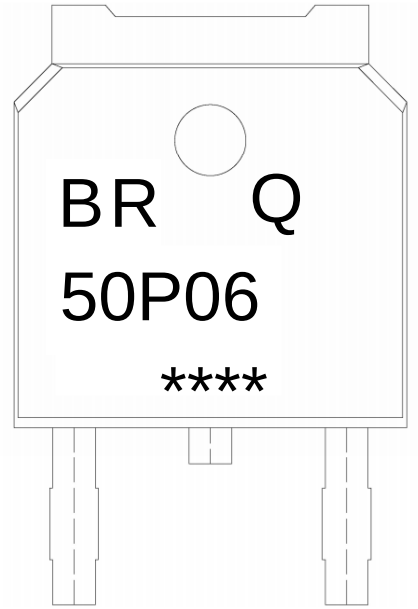


单位：mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
E	5.95	6.25	A	2.20	2.40
e1	2.24	2.34	B	0.95	1.25
			b	0.70	0.90
0.55	L1	9.85	b1		0.45
	C	0.45		1.70	
L3	0.60	0.90	D1	6.45	6.75
K	0.00	0.10			

-252 TO-

/ Marking Instructions



BR χ	
Q χ	
83S39 χ	
---- χ	

Note:

BR:	Company Code
Q:	Automobile halogen-free product Code
50P06:	Product Type Code
****:	Lot No. Code, code change with Lot No

( ) /

ب χ

1 أ 150 200 ژ 60 120sec;
2 255±5 ژ ﾍ 5±0.5sec;
3 ١ ﻫ 2 10 /sec.

Note:
1.Preheating:150~200 , Time:60~120sec.
2.Peak Temp.:255±5 , Duration:5±0.5sec.
3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

χ 260±5 ژ χ 10±1 sec.

Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

` ե / REEL

Package Type	Units					Dimension		(unit mm[3])
TO-252	2,e/31ꞴxDEꞴ0ꞴB Time:10±1							