BRD50P06

Rev.H Jun.-2025

DATA SHEET

TO-252 ŀ P ڒ MOS

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

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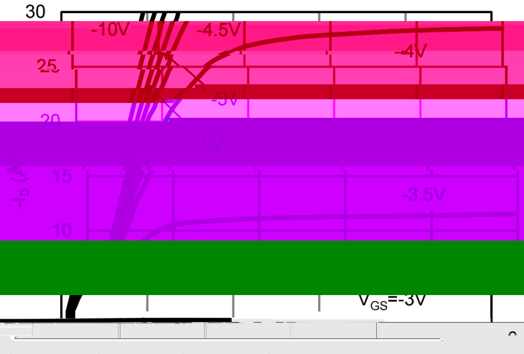
Parameter		N Symbol	Rating	Ɉ Unit
Drain-Source Voltage		V_{DS}	-60	V
Drain Current		I_D(Tc=25)	-50	A
Drain Current - Pulsed		I_{DM}	-200	A
Gate-Source Voltage		V_{GS}	±20	V
Power Dissipation		P_D(Tc=25)	85	W
Single Pulsed Avalanche Energy		E_{AS}	250	mJ
Avalanche Current(L=0.5mH)		I_{AS}	25	A
Junction 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	

Parameter	N Symbol	! Test Conditions	Min	Typ	Max	Ɉ Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=-250μA	-60	-68		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-60V V_{GS}=0V			-1.0	μA
		V_{DS}=-48V T_C=150			-10	
Gate-Body Leakage Current Forward	I_{GSS}					

/ 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



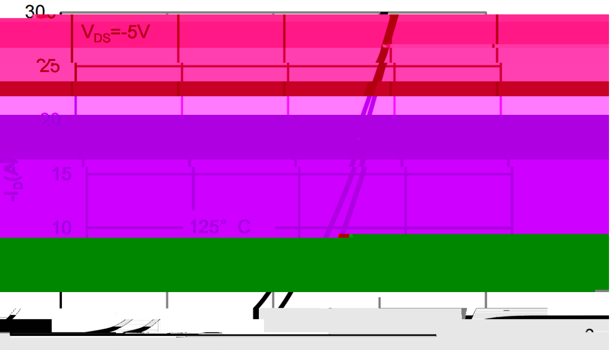
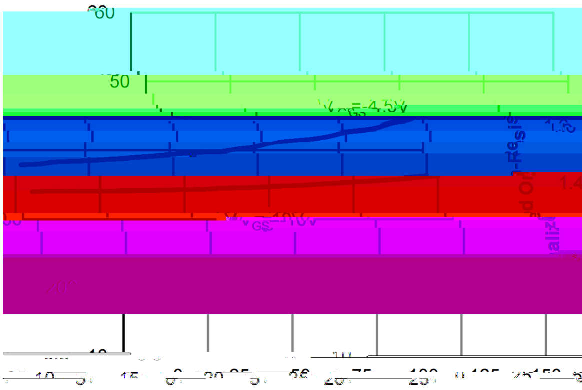
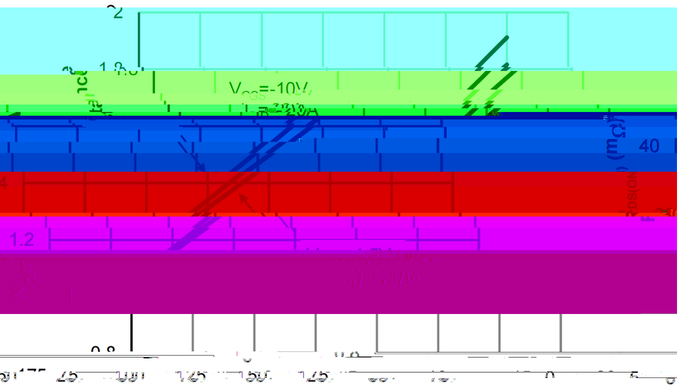
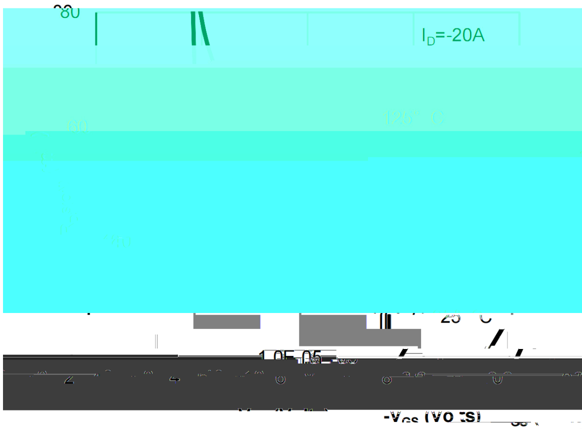


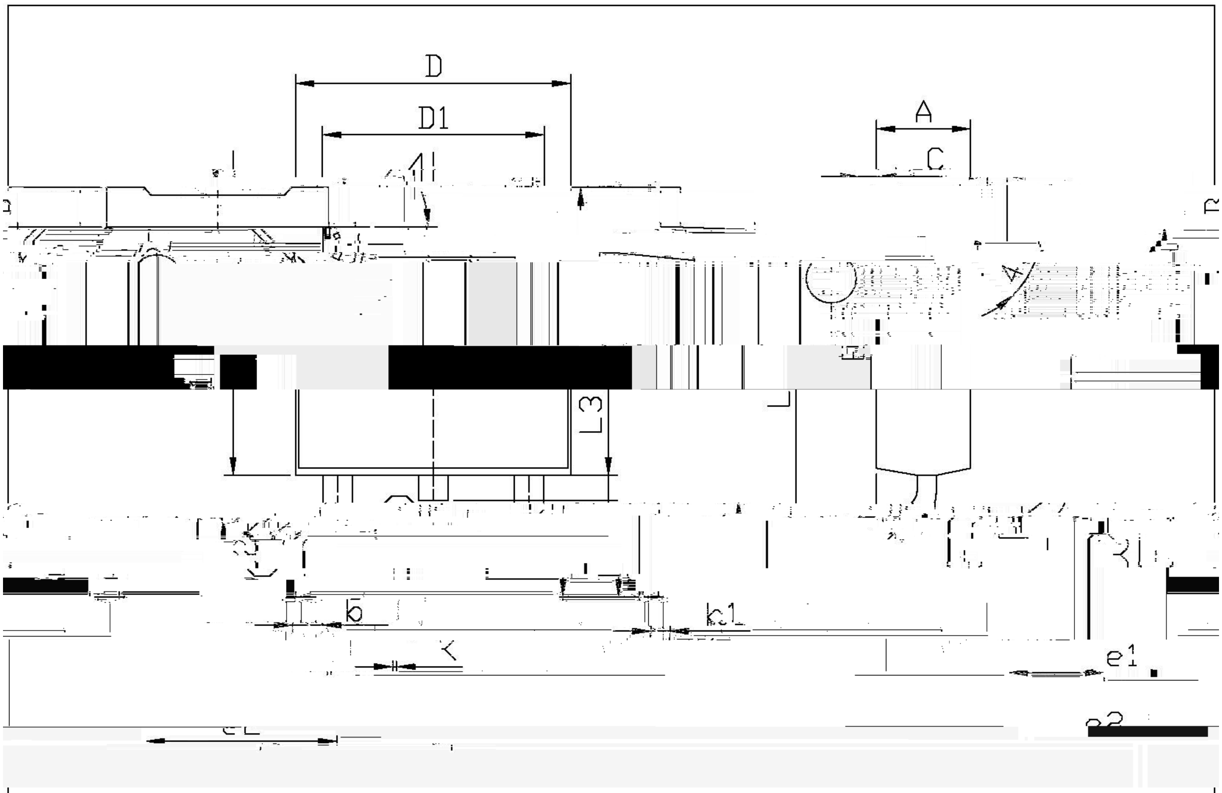
Figure 1: On-Region Characteristics







/ Package Dimensions

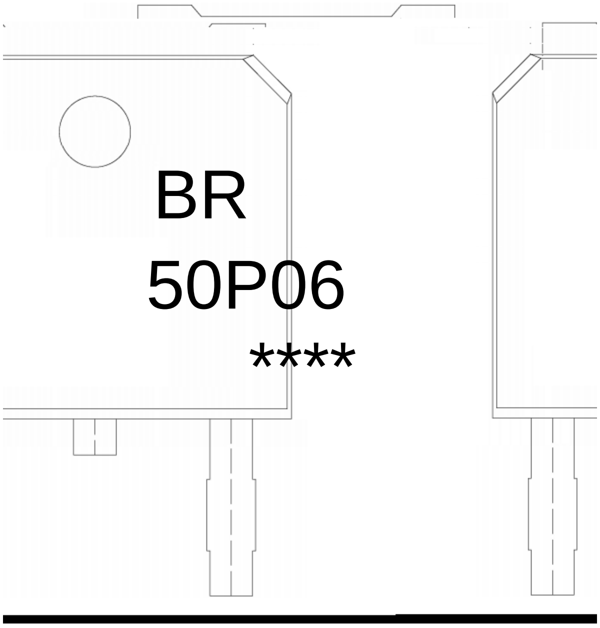


单位：mm

Symbol	Dimensions In Millimeters Min	Max	Symbol	Dimensions In Millimeters Min	Max
A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
B	0.95	1.25	e1	2.24	2.34
b	0.70	[illegible]	e2	4.43	4.72
b1	0.45	0.55	[illegible]	9.85	10.35
C	0.45	0.55	[illegible]	[illegible]	1.78
[illegible]	0.00	[illegible]	D	6.45	6.75
[illegible]	0.00	0.10	D1	5.10	5.50

TO-25

/ Marking Instructions



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Note:

BR:	Company Code
50P06:	Product Type Code
****:	Lot No. Code, code change with Lot No.

(　　) / Temperature Profile for IR Reflow Soldering(Pb-Free)

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