

Rev.B Jul.-2024

TO-252 P MOS

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

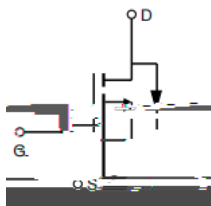
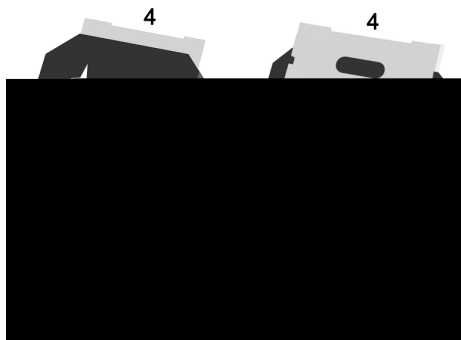
$R_{DS(on)}$

C_{rss}

Low $R_{DS(on)}$, low gate charge, low C_{rss} , fast switching, HF Product.

DC/DC

Suited for low voltage applications such as automotive, DC/DC Converters, and high efficiency switching for power management in portable and battery operated products.



PIN1 G

PIN 2 D

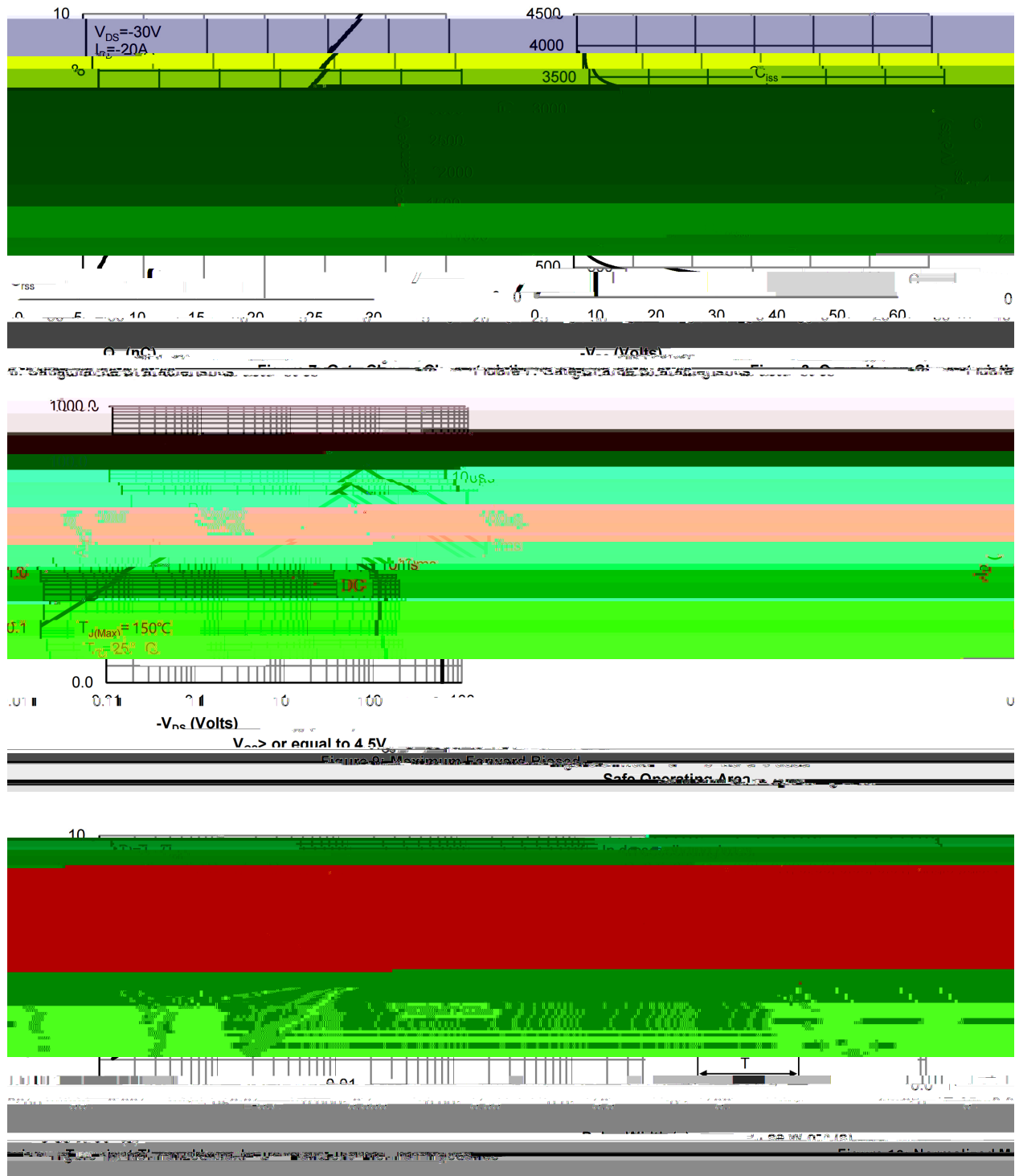
PIN 3 S

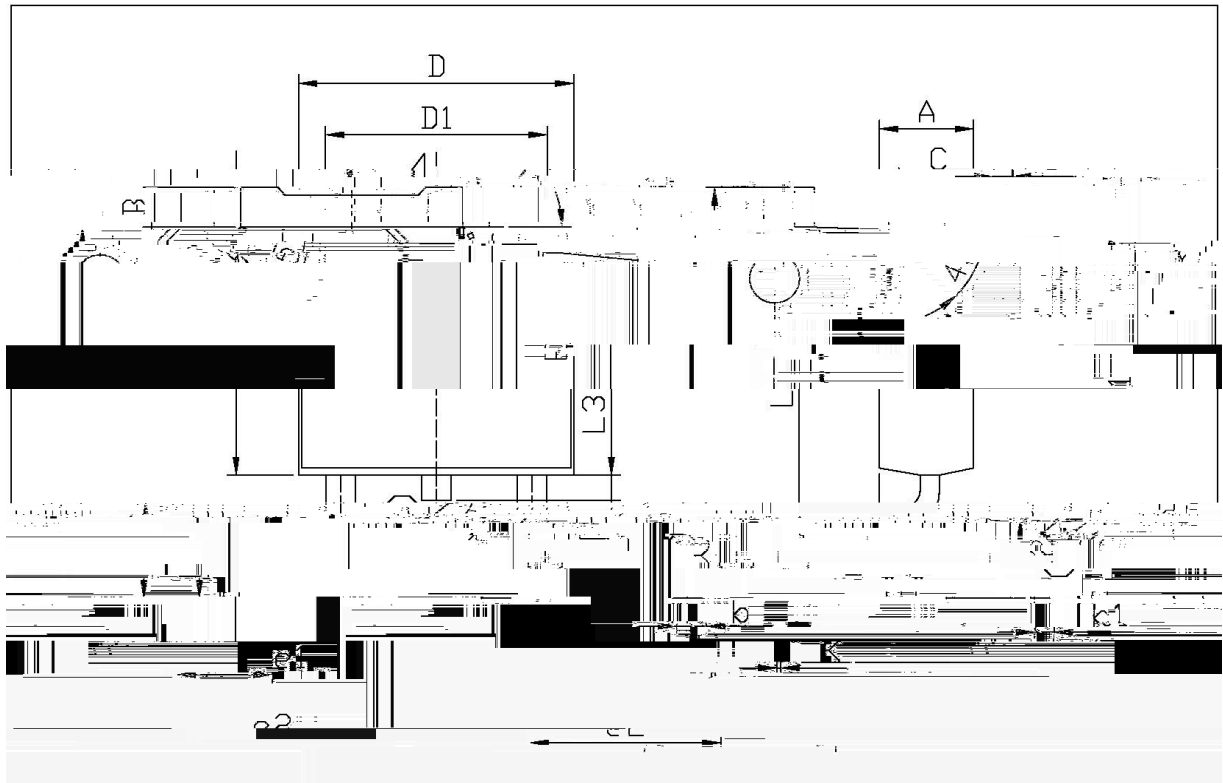
PIN 4 D

See Marking Instructions.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0\text{V}$ $I_D=-250\mu\text{A}$	-60	-68		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-60\text{V}$ $V_{GS}=0\text{V}$			-1.0	μA
		$V_{DS}=-48\text{V}$ $T_C=150$			-10	
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20\text{V}$ $V_{DS}=0\text{V}$			± 0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=-250\mu\text{A}$	-1	-1.6	-3	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=-10\text{V}$ $I_D=-20\text{A}$		30	35	$\text{m}\Omega$
	$R_{DS(on)}$	$V_{GS}=-4.5\text{V}$ $I_D=-10\text{A}$		40	45	$\text{m}\Omega$
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0\text{V}$ $I_S=-1\text{A}$			-1.2	V
Gate resistance	R_g			10		Ω
Input Capacitance	C_{iss}			3200		pF
Output Capacitance	C_{oss}	$V_{DS}=-25\text{V}$ $V_{GS}=0\text{V}$ $f=1.0\text{MHz}$		800		pF



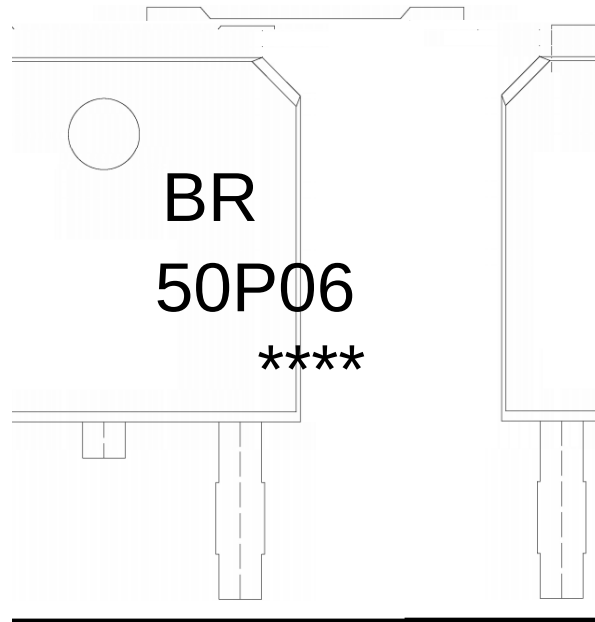


单位: mm

Dimensions, Millimeters		Dimensions, Millimeters	
Min	Max	Min	Max
2.24	2.34	0.95	1.25
4.42	4.72	0.70	0.90
10.35	10.45	0.45	0.55
12.06	12.15	0.55	0.65
0.00	0.10	6.45	6.75
0.00	0.10	5.10	5.50

52

T0-25



BR

50P06

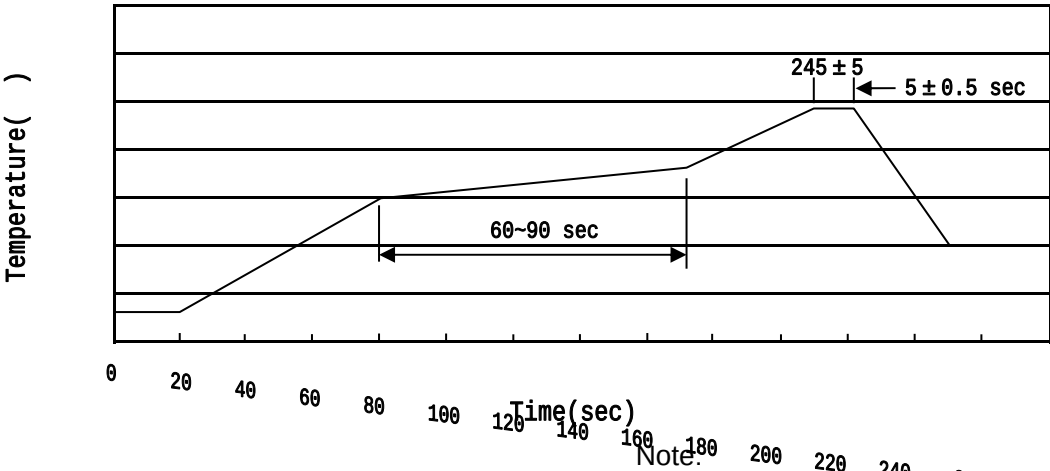
Note:

BR: Company Code

50P06: Product Type Code

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

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



- | | | | | | |
|---|---------|-----|-------------|--|--|
| 1 | 150 | 180 | 60 | 90sec; | 1. Preheating: 150~180 °C, Time: 60~90sec. |
| 2 | 245 ± 5 | | 5 ± 0.5sec; | 2. Peak Temp.: 245 ± 5 °C, Duration: 5 ± 0.5sec. | |
| 3 | | 2 | 10 °C/sec. | 3. Cooling Speed: 2~10 °C/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