

Rev.B Jul.-2024

TO-252 P MOS

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

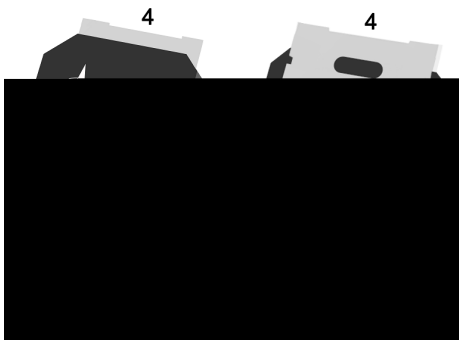
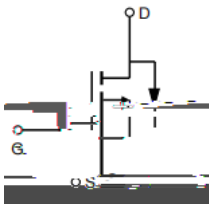
$R_{DS(on)}$

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

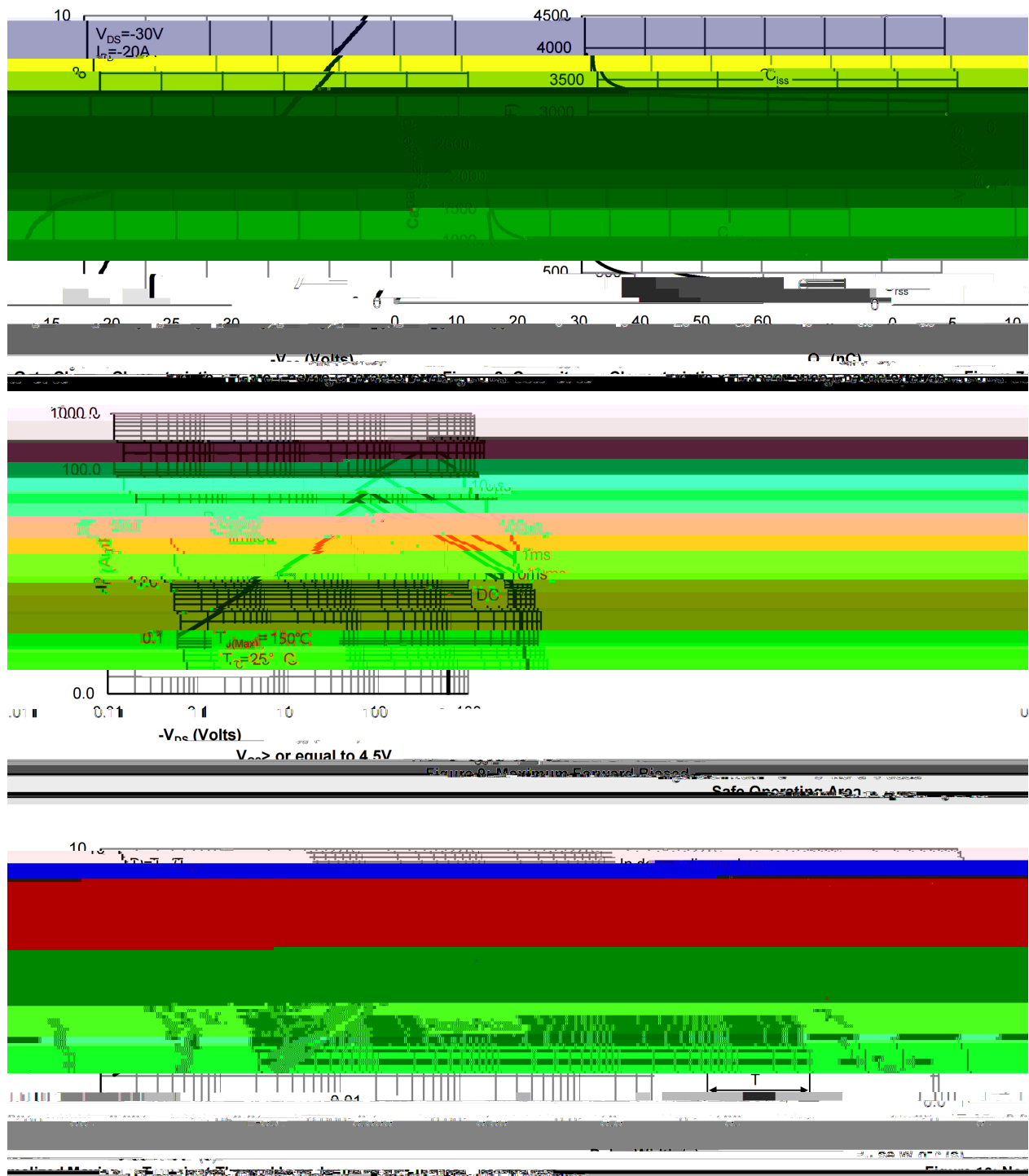
PIN 3 S

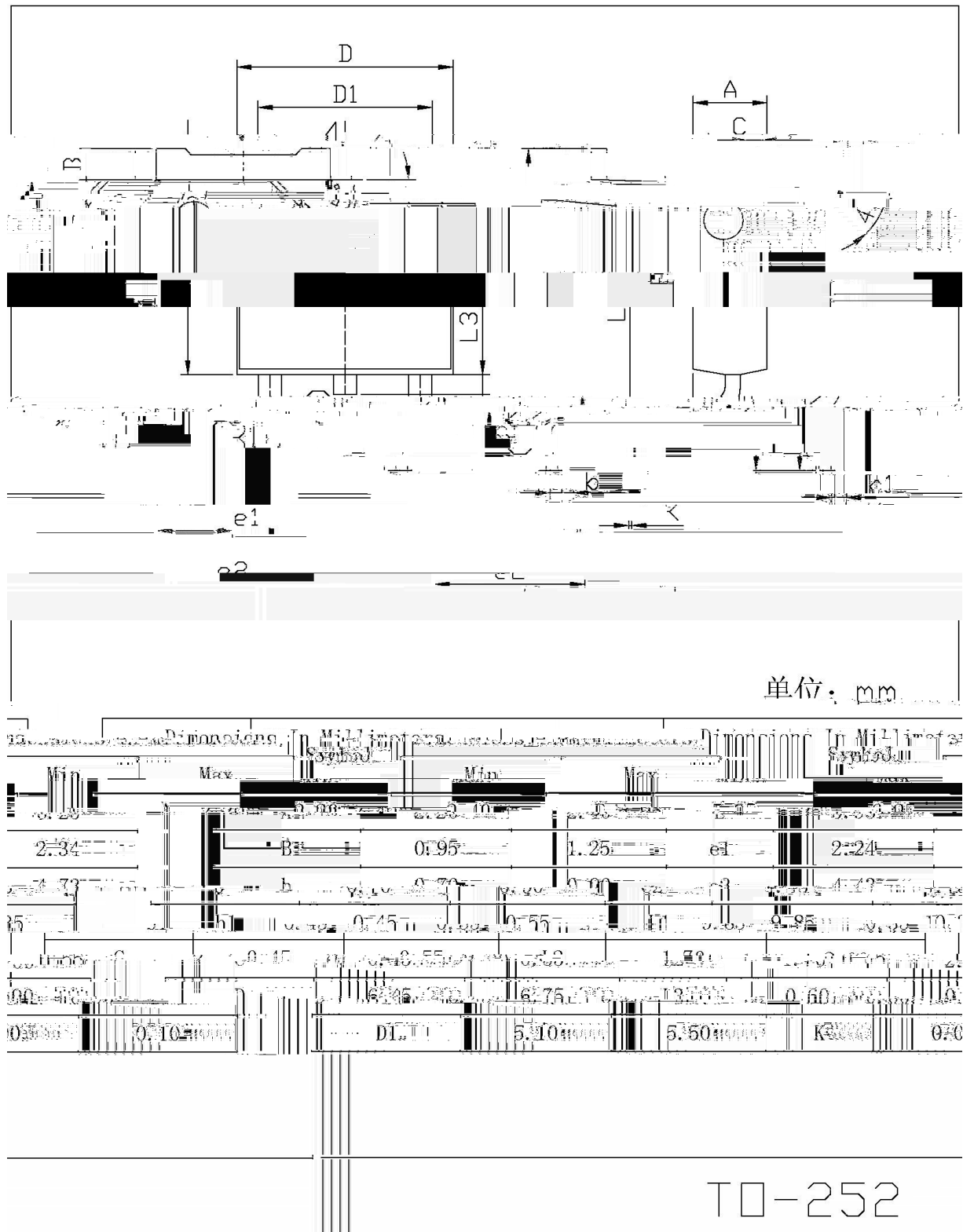
PIN 4 D

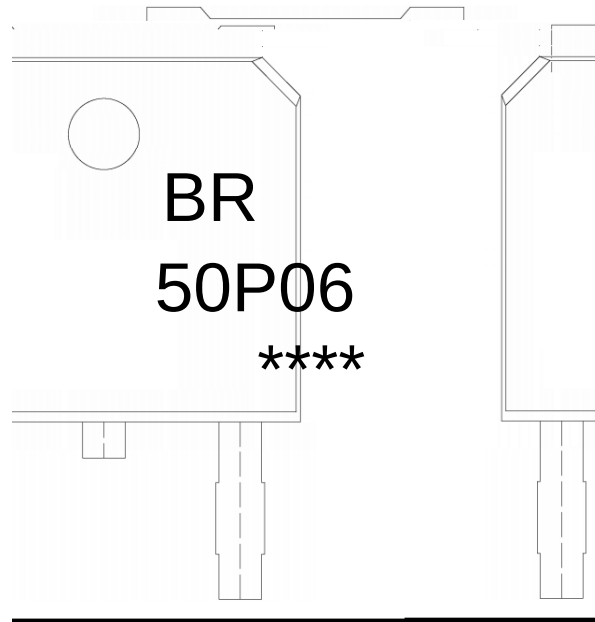
See Marking Instructions.

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}	$V_{GS}=0V$ $I_D=-250\mu A$	-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}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=-250\mu A$	-1	-1.6	-3	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=-10V$ $I_D=-20A$		30	35	$m\Omega$
	$R_{DS(on)}$	$V_{GS}=-4.5V$ $I_D=-10A$		40	45	$m\Omega$
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=-1A$			-1.2	V
Gate resistance	R_g			10		Ω
Input Capacitance	C_{iss}			3200		pF
Output Capacitance	C_{oss}	$V_{DS}=-25V$ $V_{GS}=0V$ $f=1.0\text{MHz}$		800		pF







BR

50P06

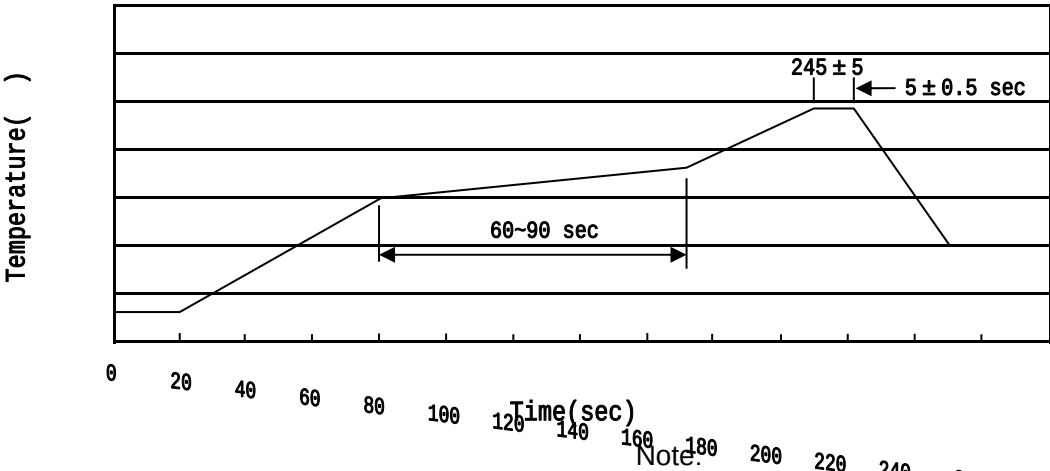
Note:

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