

/ Descriptions

TO-262 N MOS N-CHANNEL MOSFET in a TO-262 Plastic Package.

/ Features

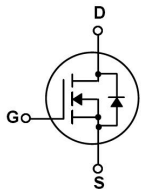
Low gate charge, low crss, fast switching.

/ Applications

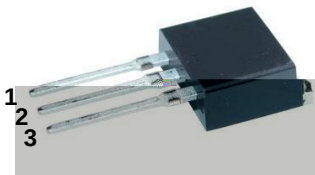
DC/DC

These devices are well suited for high efficiency switching DC/DC converters and switch mode power supplies.

/ Equivalent Circuit



/ Pinning



PIN1 G PIN 2 D PIN 3 S

/ h_{FE} Classifications & Marking

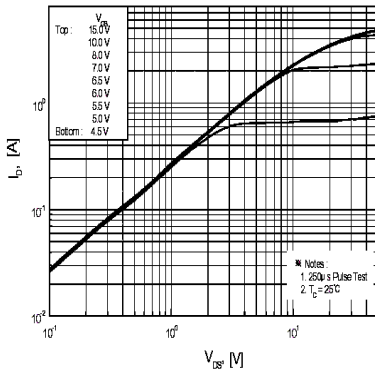
See Marking Instructions.

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	600	V
Drain Current	$I_D(T_c=25^\circ\text{C})$	2.0	A
Drain Current	$I_D(T_c=100^\circ\text{C})$	1.3	A
Drain Current - Pulsed	I_{DM}	6.0	A
Gate-Source Voltage	V_{GSS}	± 30	V
Single Pulsed Avalanche Energy	E_{AS}	120	mJ
Repetitive Avalanche Energy	E_{AR}	5.4	mJ
Avalanche Current	I_{AR}	2.0	A
Power Dissipation	$P_D(T_c=25^\circ\text{C})$	54	W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to 150	
Thermal Resistance Junction-case	$R_{\theta JC}$	2.32	/W
Thermal Resistance Junction-ambient	$R_{\theta JA}$	62.5	/W

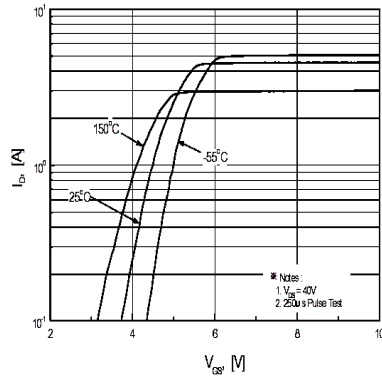
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250\mu A$	600			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=600V$ $V_{GS}=0V$			1.0	μA
		$V_{DS}=480V$ $T_c=125^\circ\text{C}$			100	μA
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 30V$ $V_{DS}=0V$			± 0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	2.0		4.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=1.0A$		4.0	5.0	Ω
Forward Transconductance	g_{FS}	$V_{DS}=40V$ $I_D=1.0A$		2.05		S
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=2.0A$			1.4	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		320	420	pF
Output Capacitance	C_{oss}			35	46	pF

/ Electrical Characteristic Curve

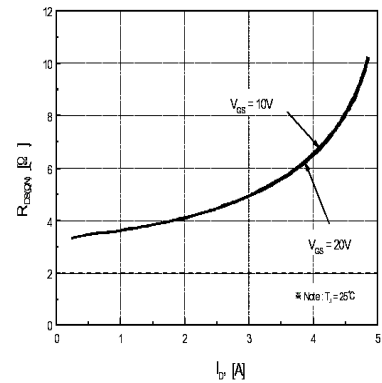
$I_D - V_{DS}$



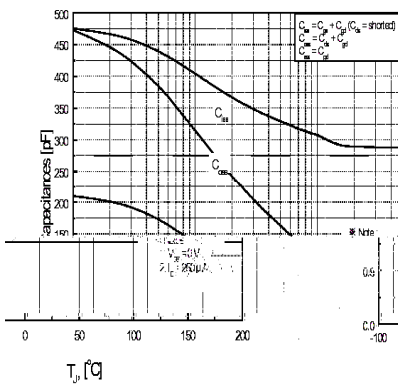
$I_D - V_{GS}$



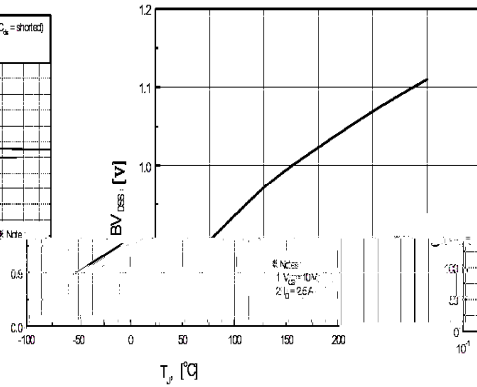
$R_{DS(on)} - I_D$



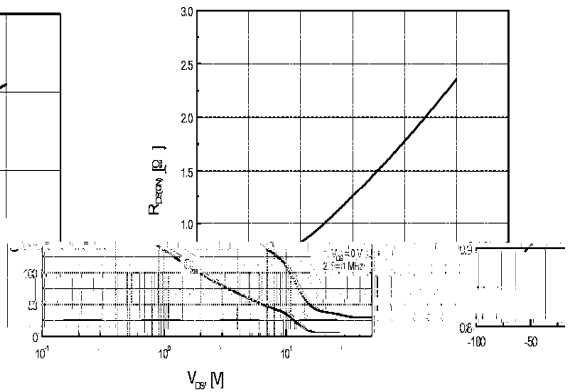
$C_{iss}, C_{oss}, C_{rss} - V_{DS}$



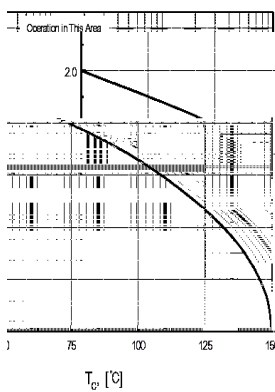
$BV_{DSS} - T_J$



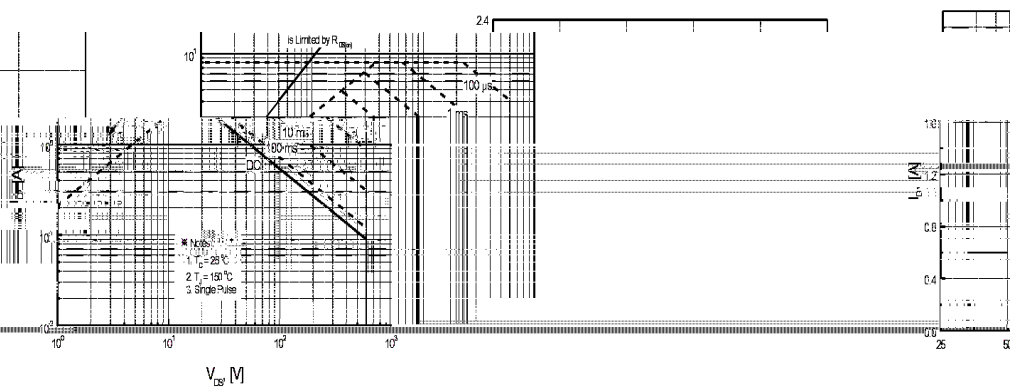
$R_{DS(on)} - T_J$



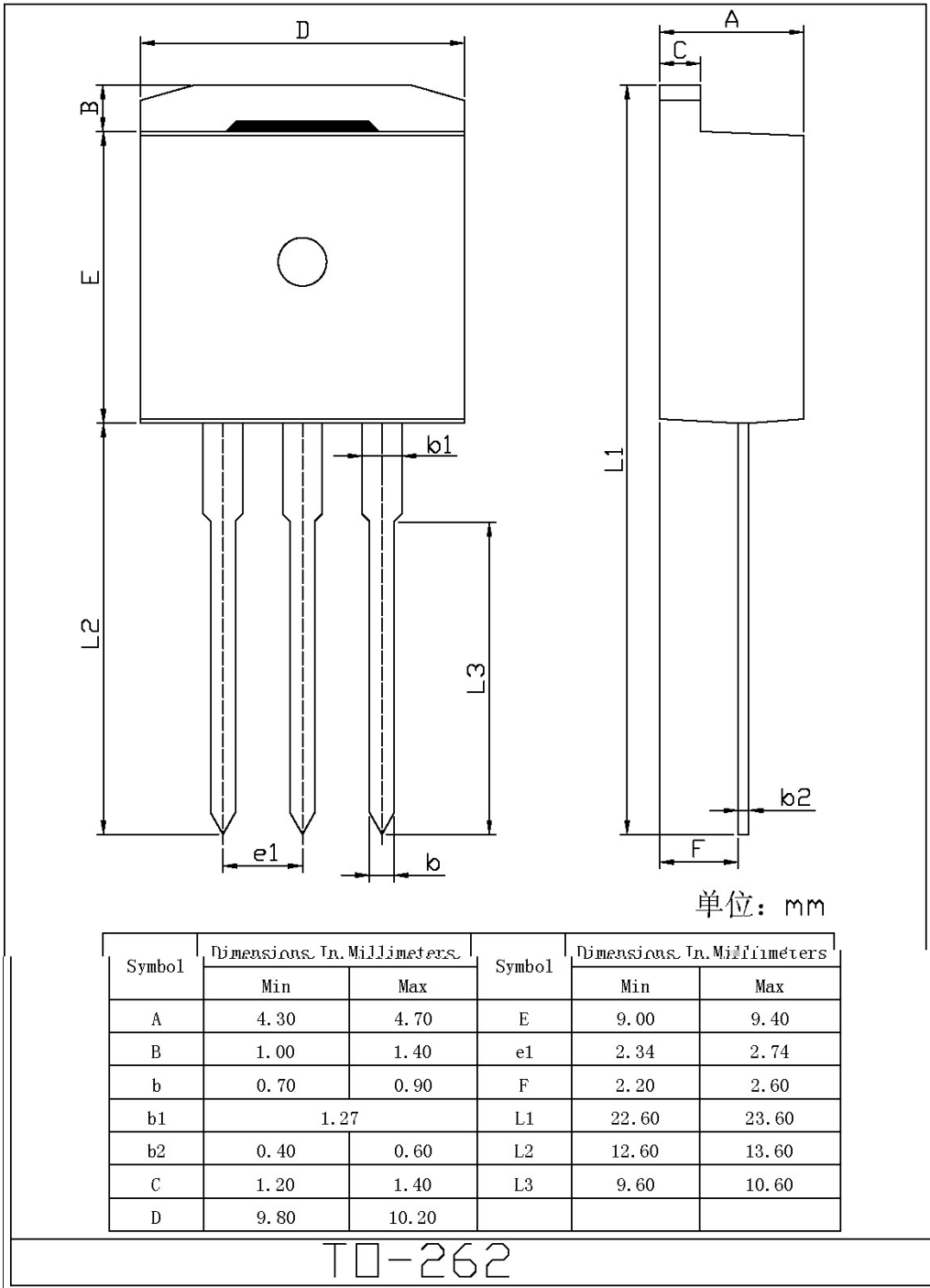
$I_D - V_{DS}$



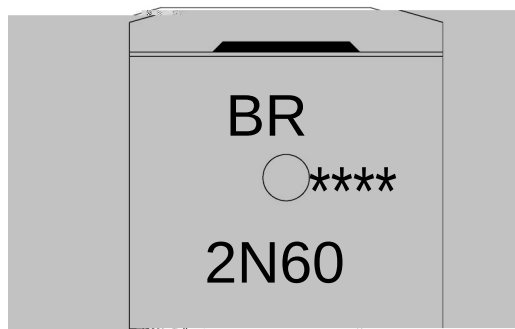
$I_D - T_C$



/ Package Dimensions



/ Marking Instructions



BR

2N60

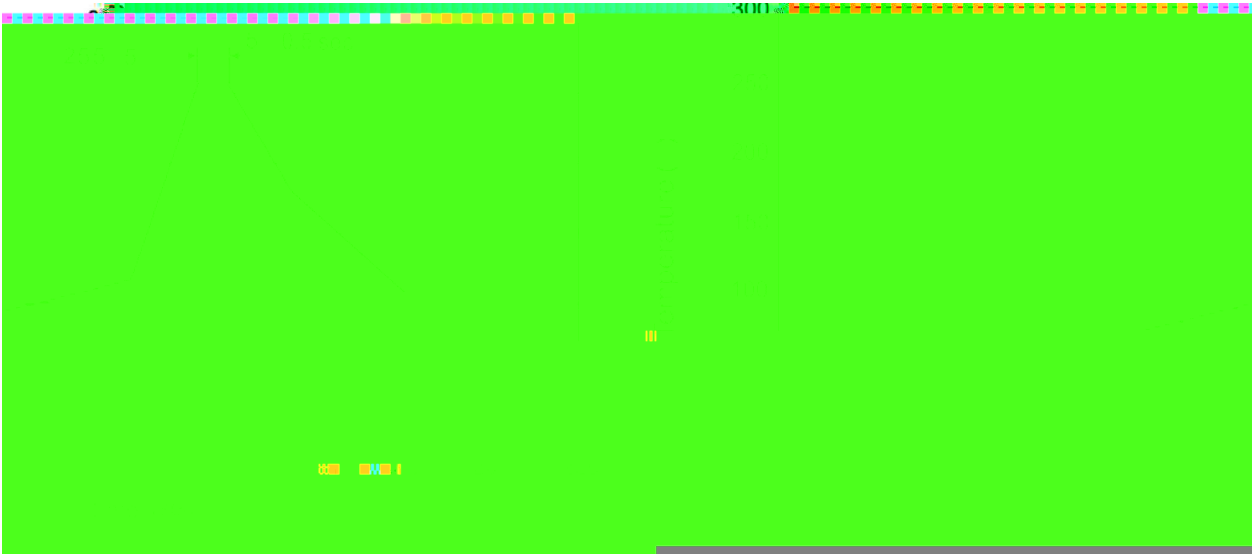
Note:

BR: Company Code

2N60: Product Type.

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

() / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- | | | | | | |
|---|-------|-----|-----------|---|--------------------------------------|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , Time:60~90sec. |
| 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. |

/ Resistance to Soldering Heat Test Conditions

270±5 10±1 sec. Temp.:270±5 Time:10±1 sec

/ Packaging SPEC.

/ TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
TO-262	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180