

/ Descriptions

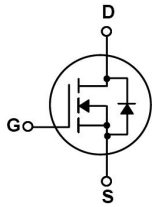
TO-263 N MOS N-CHANNEL MOSFET in a TO-263 Plastic Package.

/ Features

Low gate charge, low crss, fast switching.

/ Applications

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

/ Equivalent Circuit**/ Pinning**

PIN1 G PIN 2,4 D PIN 3 S

/ h_{FE} Classifications & Marking

See Marking Instructions.

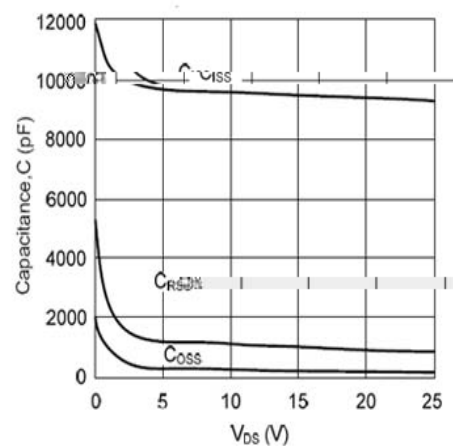
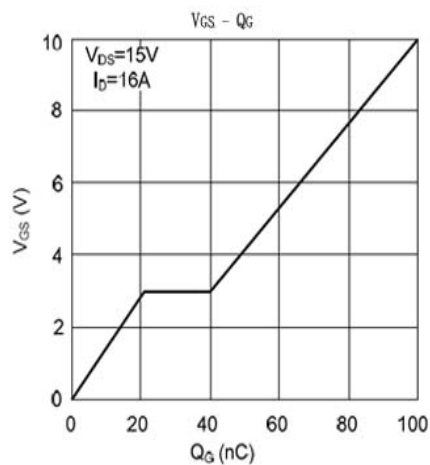
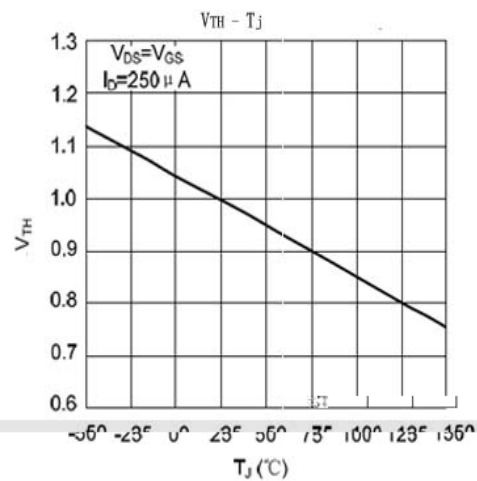
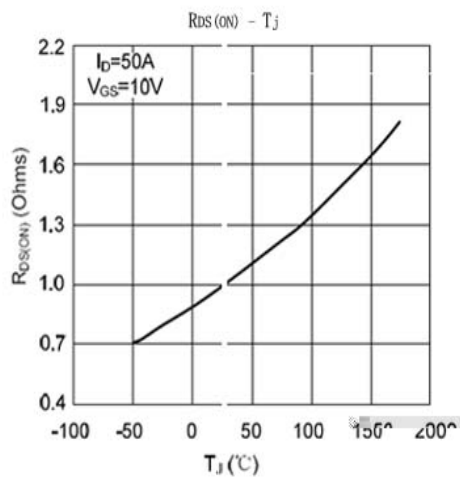
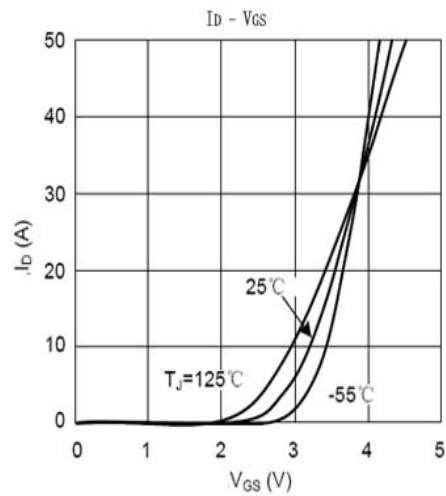
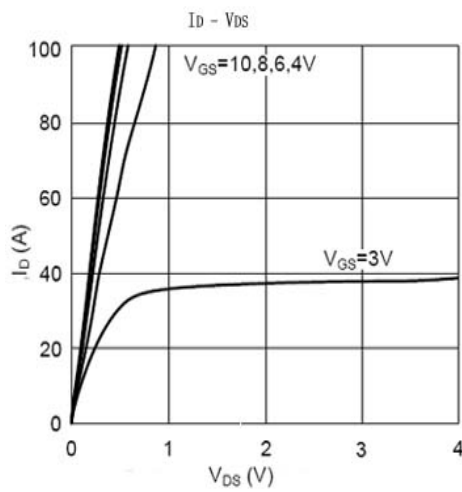
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	30	V
Drain Current	$I_D(T_c=25^{\circ}C)$	100	A
Peak Drain Current	I_{DM}	400	A
Gate-Source Voltage	V_{GSS}	± 20	V
Single Pulsed Avalanche Energy	E_{AS}	875	mJ
Total Power Dissipation	$P_D(T_c=25^{\circ}C)$	100	W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 150	

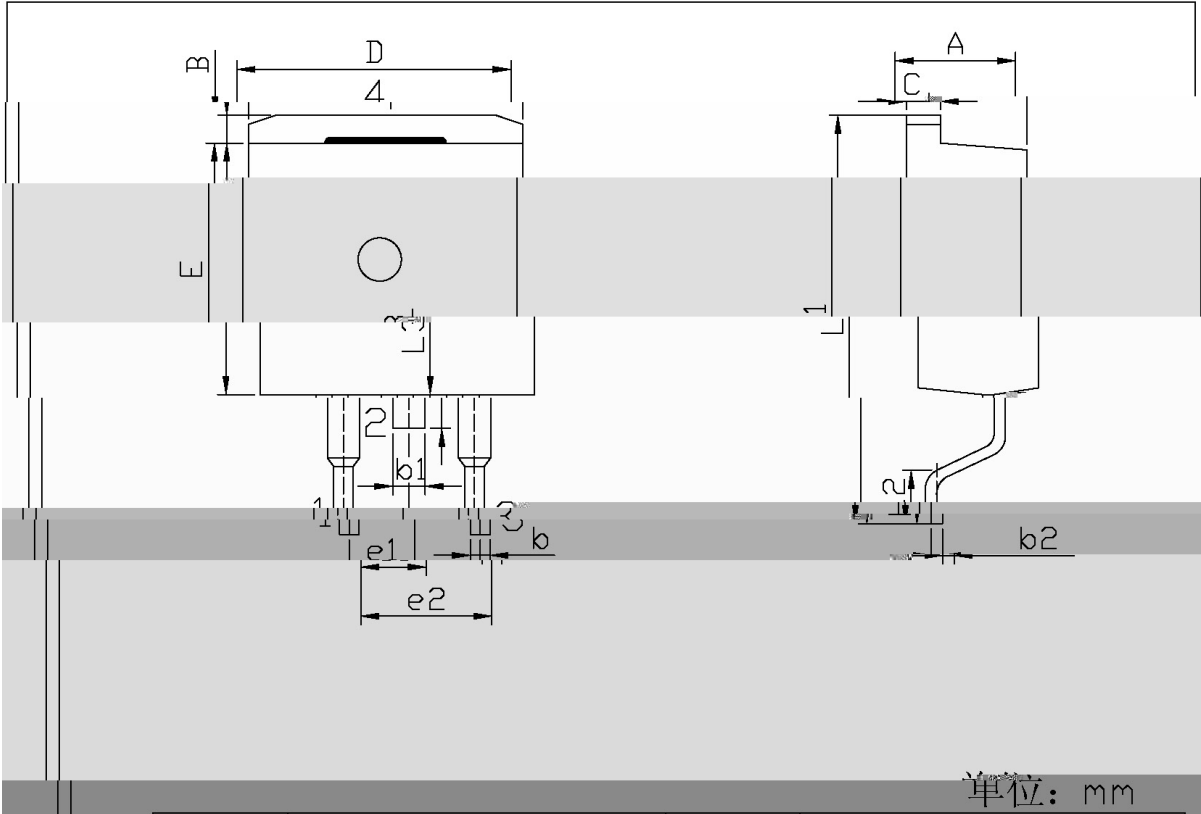
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Zero Gate Voltage Drain Current	BV_{DSS}	$V_{GS}=0V$ $I_D=250\mu A$	30			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=30V$ $V_{GS}=0V$			1	μA
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	1.0		3.0	V
Forward On Voltage	V_{SD}	$I_S=20A$ $V_{GS}=0V$			1.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=50A$		3.5	4.5	m Ω
		$V_{GS}=4.5V$ $I_D=40A$		5.0	7.0	m Ω
Input Capacitance	C_{iss}	$V_{GS}=0V$ $f=1.0MHz$ $V_{DS}=15V$		9500		pF
Output Capacitance	C_{oss}			800		pF
Reverse Transfer Capacitance	C_{rss}			300		pF
Total Gate Charge	Q_G	$V_{DS}=15V$ $V_{GS}=5V$ $I_D=16A$		50	65	nC
Gate Source Charge	Q_{GS}			20.8		nC
Gate Drain Charge	Q_{GD}			19		nC
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=15V$ $I_D=1A$ $R_{GEN}=6\Omega$ $V_{GS}=10V$		25.7	50	ns
Turn-On Rise Time	t_r			10	20	ns
Turn-Off Delay Time	$t_{d(off)}$			128	200	ns
Turn-Off Fall Time	t_f			34	70	ns

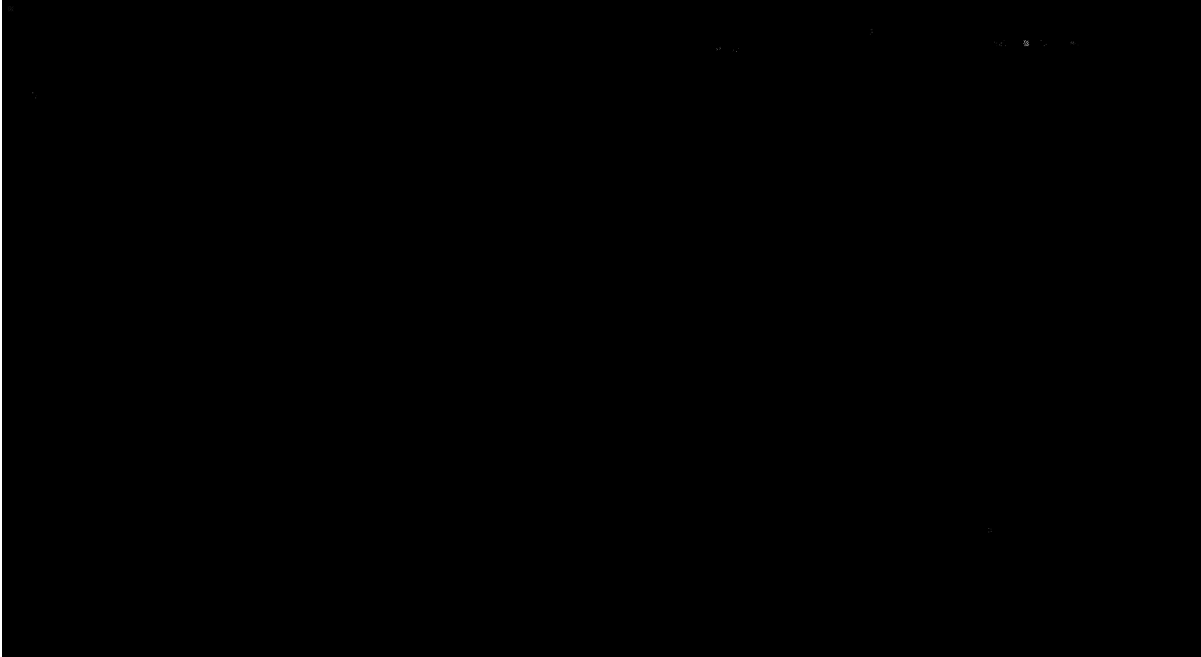
/ Electrical Characteristic Curve



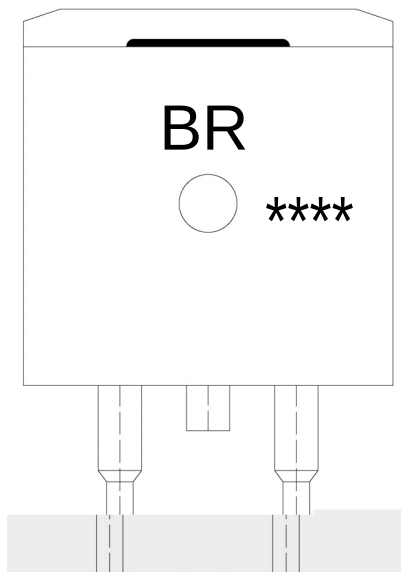
/ Package Dimensions



Dimensions In Millimeters				Dimensions In Millimeters			
Symbol		Min	Max	Symbol		Min	Max
A		4.30	4.70	E		9.00	9.40



/ Marking Instructions



BR

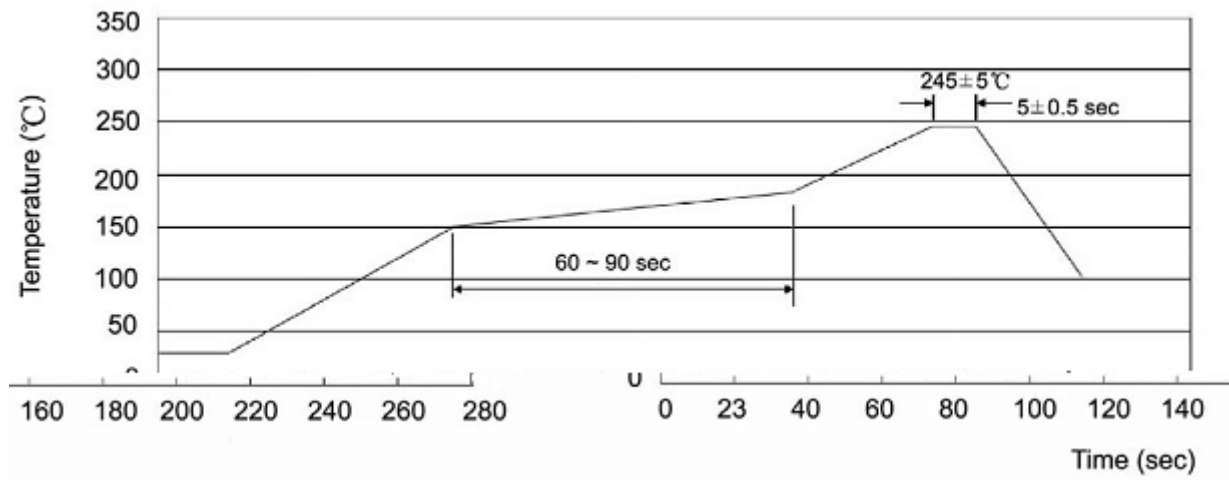
Note:

BR: Company Code

100N03: 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 | 245 | 5 | 5 | 0.5sec; | 2.Peak Temp.:245 5 , Duration:5 0.5sec. |
| 3 | | 2 | 10 | /sec. | 3. Cooling Speed: 2~10 /sec. |