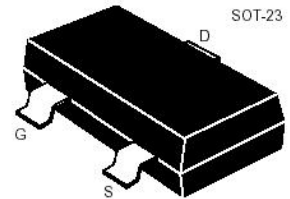




BSS84

SOT-23 場效應晶體管(SOT-23 Field Effect Transistors)



P-Channel Enhancement-Mode MOS FETs

P 溝道增強型 MOS 場效應管

■ MAXIMUM RATINGS 最大額定值

Characteristic 特性參數	Symbol 符號	Rat 額定值	Unit 單位
Drain-Source Voltage 漏極-源極電壓	BV_{DSS}	-50	V
Gate- Source Voltage 柵極-源極電壓	V_{GS}	± 20	V
Drain Current (continuous) 漏極電流-連續	I_{DR}	-130	mA
Drain Current (pulsed) 漏極電流-脈沖	I_{DRM}	-520	mA

■ THERMAL CHARACTERISTICS 熱特性

Characteristic 特性	Symbol 符號	Max 最大值	Unit 單位
Total Device Dissipation 總耗散功率 $T_A=25^{\circ}\text{C}$ 環境溫度為 25°C Derate above 25°C 超過 25°C 遞減	PD	200 1.8	mW mW/ $^{\circ}\text{C}$
Thermal Resistance Junction to Ambient 熱阻	$R_{\theta JA}$	350	$^{\circ}\text{C}/\text{W}$
Junction and Storage Temperature 結溫和儲存溫度	T_J, T_{stg}	$150^{\circ}\text{C}, -55\text{to}+150^{\circ}\text{C}$	



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■ **DEVICE MARKING 打標**

BSS84=PD

■ **ELECTRICAL CHARACTERISTICS 電特性**

($T_A=25^{\circ}\text{C}$ unless otherwise noted 如無特殊說明，溫度為 25°C)

Characteristic 特性參數	Symbol 符號	Min 最小值	Typ 典型值	Max 最大值	Unit 單位
Drain-Source Breakdown Voltage 漏極-源極擊穿電壓($I_D=-250\mu\text{A}, V_{GS}=0\text{V}$)	BV_{DSS}	-50	—	—	V
Gate Threshold Voltage 柵極開啓電壓($I_D=-250\mu\text{A}, V_{GS}=V_{DS}$)	$V_{GS(th)}$	-1.0	—	-2.5	V
Diode Forward Voltage Drop 內附二極管正向壓降 ($I_{SD}=-200\text{mA}, V_{GS}=0\text{V}$)	V_{SD}	—	—	-1.5	V
Zero Gate Voltage Drain Current 零柵壓漏極電流($V_{GS}=0\text{V}, V_{DS}=-50\text{V}$) ($V_{GS}=0\text{V}, V_{DS}=-50\text{V}, T_A=125^{\circ}\text{C}$)	I_{DSS}	—	—	-15 -60	μA
Gate Body Leakage 柵極漏電流($V_{GS}=\pm 20\text{V}, V_{DS}=0\text{V}$)	I_{GSS}	—	—	± 10	nA
Static Drain-Source On-State Resistance 靜態漏源導通電阻($I_D=-100\text{mA}, V_{GS}=-5\text{V}$)	$R_{DS(ON)}$	—	—	10	Ω
Input Capacitance 輸入電容 ($V_{GS}=0\text{V}, V_{DS}=-25\text{V}, f=1\text{MHz}$)	C_{ISS}	—	73	—	pF
Common Source Output Capacitance 共源輸出電容($V_{GS}=0\text{V}, V_{DS}=-25\text{V}, f=1\text{MHz}$)	C_{OSS}	—	10	—	pF
Turn-ON Time 開啓時間 ($V_{DS}=-30\text{V}, I_D=-270\text{mA}, R_{GEN}=6\Omega$)	$t_{(on)}$	—	—	5	ns
Turn-OFF Time 關斷時間 ($V_{DS}=-30\text{V}, I_D=-270\text{mA}, R_{GEN}=6\Omega$)	$t_{(off)}$	—	—	20	ns
Reverse Recovery Time 反向恢復時間 ($I_{SD}=-100\text{mA}, V_{GS}=0\text{V}$)	t_{rr}	—	10	—	ns

1. FR-5=1.0×0.75×0.062in.
2. Alumina=0.4×0.3×0.024in.99.5%alumina.
3. Pulse Width≤300 μs ; Duty Cycle≤2.0%.

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■ TYPICAL CHARACTERISTIC CURVE 典型特性

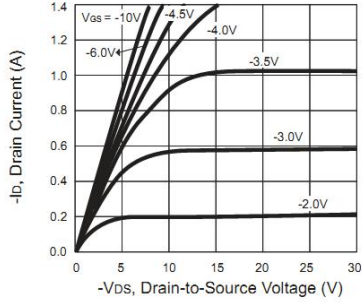


Figure 1. Output Characteristics

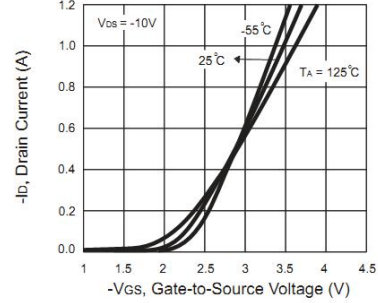


Figure 2. Transfer Characteristics

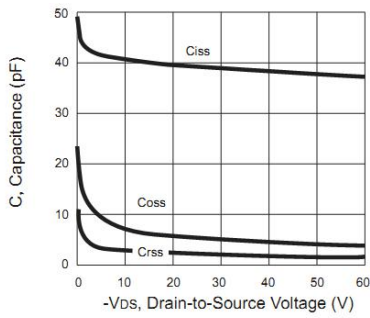


Figure 3. Capacitance

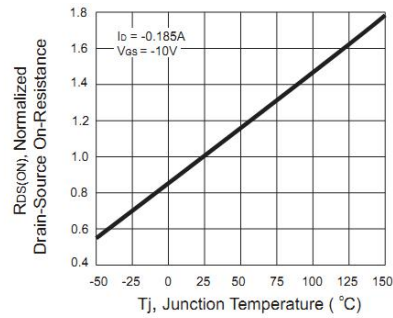


Figure 4. On-Resistance Variation with Temperature

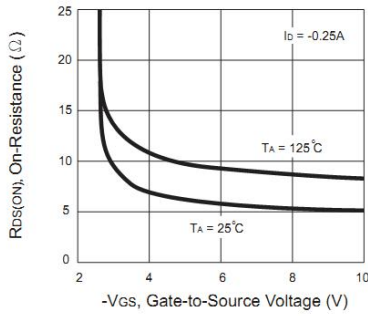


Figure 5. On-Resistance Variation with Gate-to-Source Voltage.

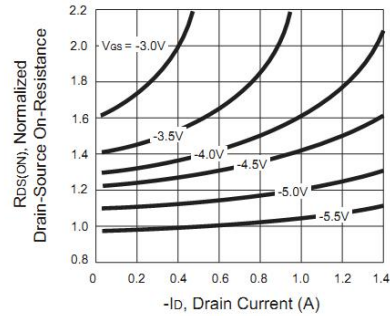


Figure 6. On-Resistance Variation with Drain Current and Gate Voltage.

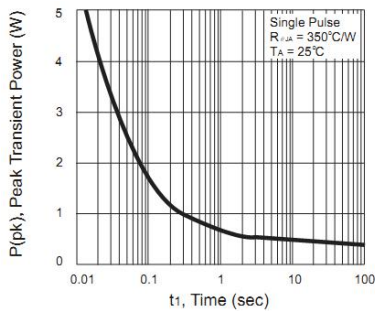


Figure 7. Single Pulse Maximum Power Dissipation

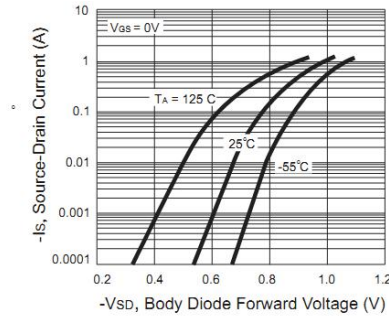


Figure 8. Body Diode Forward Voltage Variation with Source Current