

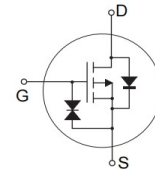
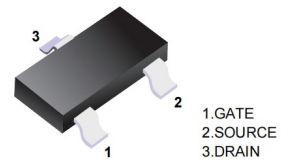
**BSS84****-60V/-0.13A P Channel Advanced Power MOSFET****Features**

- Energy efficient
- Low threshold voltage
- High-speed switching
- Miniature surface mount package saves board space
- ESD protected(HBM) up to 2KV

Applications

- Switching circuits
- Power management

$V_{(BR)DSS}$	$R_{DS(ON)}$ Max	I_D Max
-60V	8Ω @ -10 V	-0.13A
	10Ω @ -5V	

SOT23**Order Information**

Product	Package	Marking	Packing	Min Unit Quantity
BSS84	SOT23	--	3000PCS/Reel	3000PCS

Absolute Maximum Ratings

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

Symbol	Parameter	Rating	Units	
Common Ratings (TA=25°C Unless Otherwise Noted)				
V _{GS}	Gate-Source Voltage	±20	V	
V _{(BR)DSS}	Drain-Source Breakdown Voltage	-60	V	
T _J	Maximum Junction Temperature	150	°C	
T _{STG}	Storage Temperature Range	-50 to 150	°C	
Mounted on Large Heat Sink				
I _{DM}	Pulse Drain Current Tested①	T _A =25°C	-0.52	A
I _D	Continuous Drain Current	T _A =25°C	-0.13	A
P _D	Maximum Power Dissipation	T _A =25°C	225	mW
R _{θJA}	Thermal Resistance Junction-Ambient		556	°C/W

Symbol	Parameter	Conditions	Min	Typ	Max	Units
Static Electrical Characteristics @ T _J = 25°C (unless otherwise stated)						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V I _D =-250μA	-60	--	--	V
I _{DSS}	Zero Gate Voltage Drain Current(T _A =25°C)	V _{DS} =-50V, V _{GS} =0V	--	--	-1	μA
	Zero Gate Voltage Drain Current(T _A =125°C)	V _{DS} =-25V, V _{GS} =0V	--	--	-0.1	μA
I _{GSS}	Gate-Body Leakage Current	V _{GS} =±20V, V _{DS} =0V	--	--	±10	μA
V _{GS(TH)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =-250μA	-1.0	-1.5	-2.5	V
R _{DS(ON)}	Drain-Source On-State Resistance②	V _{GS} =-10V, I _D =-0.1A	--	2.0	8	Ω
		V _{GS} =-5V, I _D =-0.1A	--	2.4	10	Ω
Dynamic Electrical Characteristics @ T _J = 25°C (unless otherwise stated)						
C _{iss}	Input Capacitance	V _{DS} =-5V, V _{GS} =0V, f=1MHz	--	30	--	pF
C _{oss}	Output Capacitance		--	10	--	pF
C _{rss}	Reverse Transfer Capacitance		--	5	--	pF
Q _g	Total Gate Charge	V _{DS} =-25V I _D =-0.1A, V _{GS} =-5V	--	0.9	--	nC
Q _{gs}	Gate Source Charge		--	0.2	--	nC
Q _{gd}	Gate Drain Charge		--	0.3	--	nC
Switching Characteristics						
t _{d(on)}	Turn on Delay Time	V _{DD} =-15V, I _D =-2.5A, R _L =50Ω,	--	2.5	--	ns
t _r	Turn on Rise Time		--	1	--	ns
t _{d(off)}	Turn Off Delay Time		-	16	--	ns
t _f	Turn Off Fall Time		--	8	--	ns
Source Drain Diode Characteristics						
I _{SD}	Source drain current(Body Diode)	T _A =25°C	--	--	-0.13	A
V _{SD}	Forward on voltage②	T _J =25°C, I _{SD} =-0.13A, V _{GS} =0V	--	--	-1.3	V

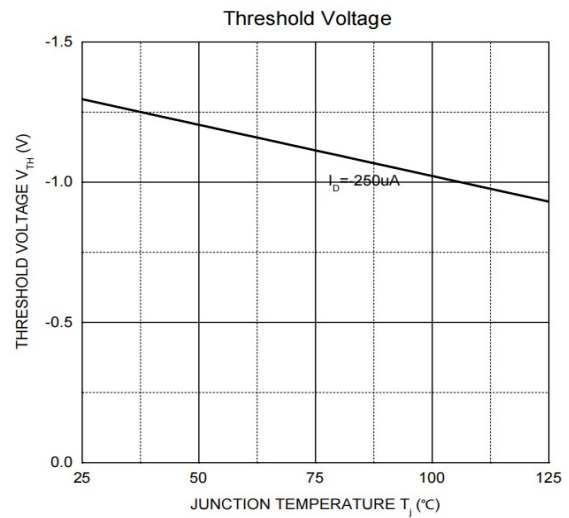
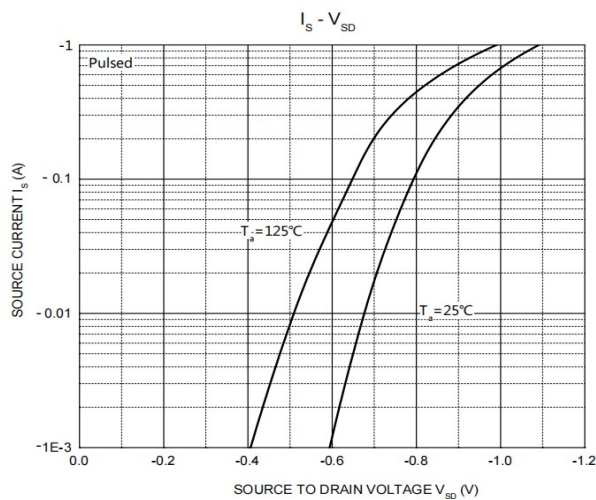
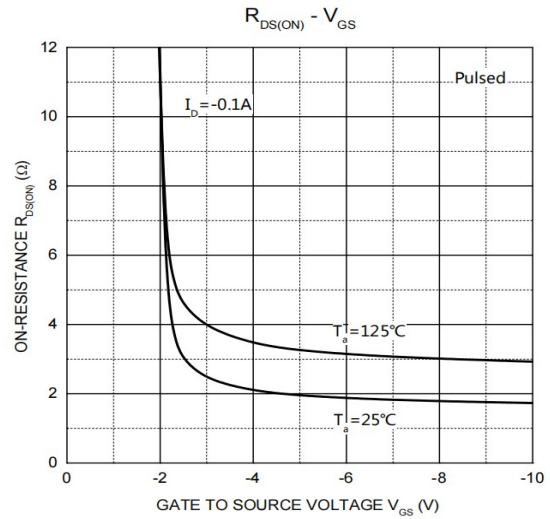
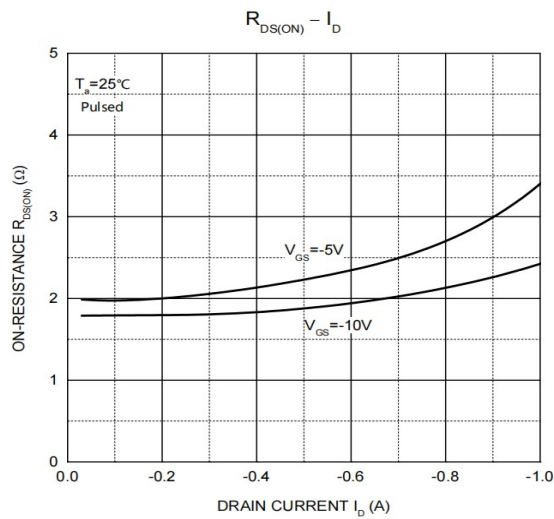
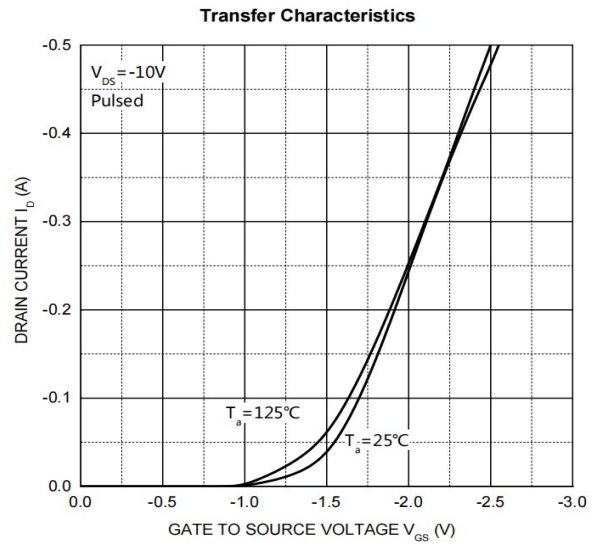
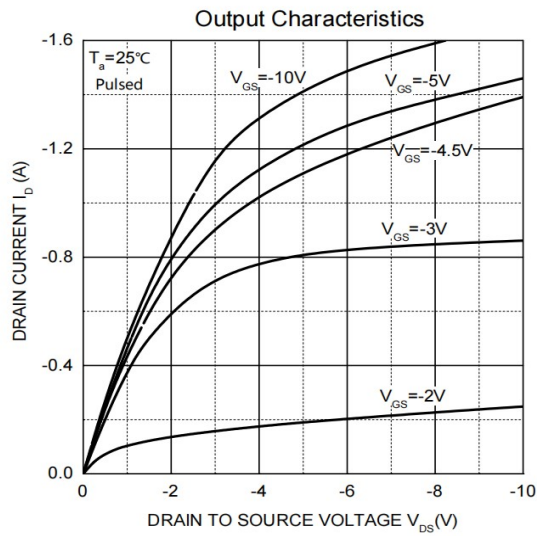
Notes:

① Pulse width limited by maximum allowable junction temperature

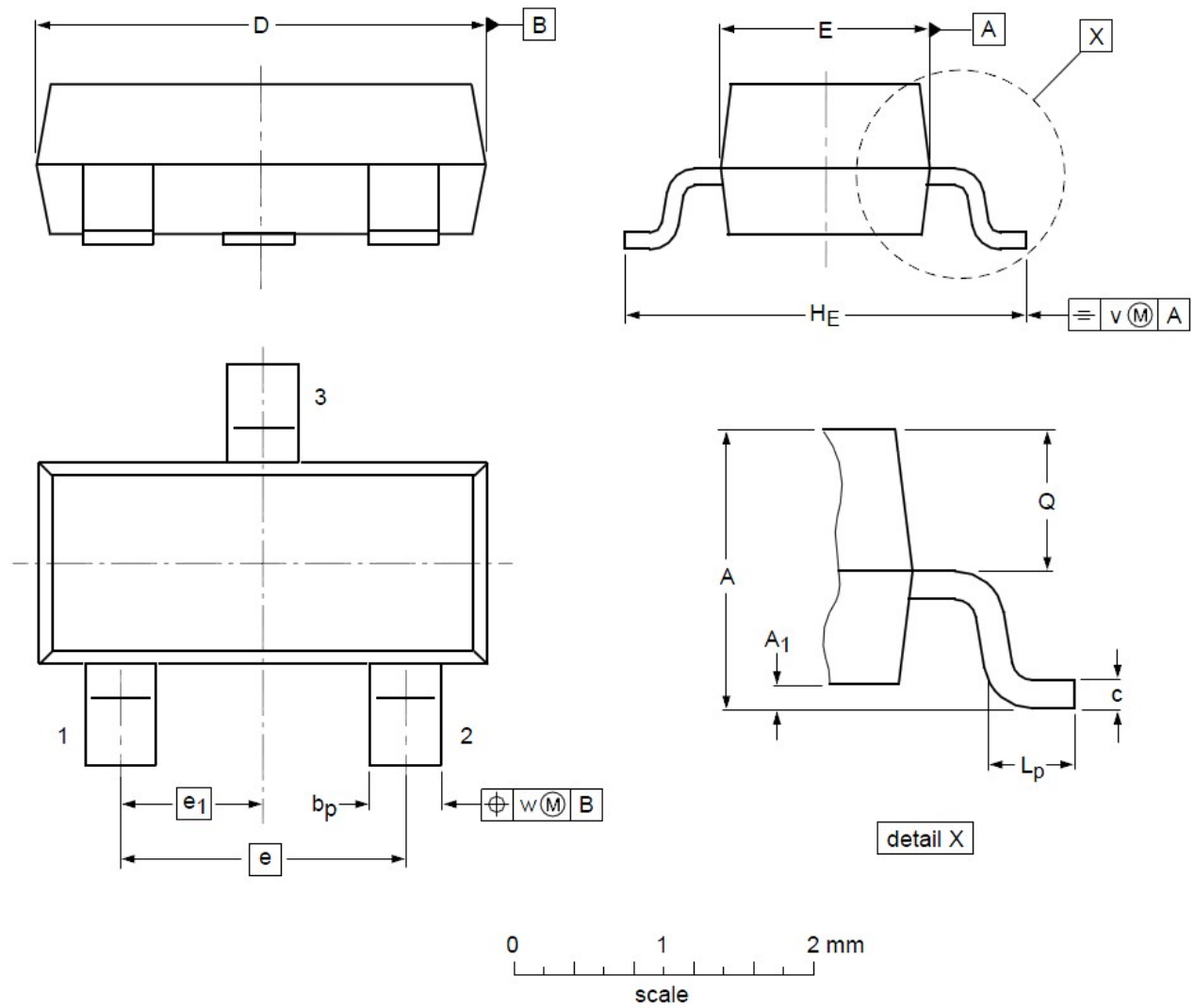
②Pulse test ; Pulse width≤300μs, duty cycle≤2%.

Typical Characteristics

BSS84



SOT23 Mechanical Data



DIMENSIONS (unit : mm)

Symbol	Min	Typ	Max	Symbol	Min	Typ	Max
A	0.90	1.01	1.15	A₁	0.01	0.05	0.10
b_p	0.30	0.42	0.50	c	0.08	0.13	0.15
D	2.80	2.92	3.00	E	1.20	1.33	1.40
e	--	1.90	--	e₁	--	0.95	--
H_E	2.25	2.40	2.55	L_p	0.30	0.42	0.50
Q	0.45	0.49	0.55	v	--	0.20	--
w	--	0.10	--				