■ Electrical Characteristics (T_J=25 unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}= 0V, I_D=250μA	100	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=100V, V_{GS}=0V	-	-	1	μA
		V_{DS}=100V, V_{GS}=0V, Tj=150	-	-	100	
Gate-Body Leakage Current	I_{GSS}	V_{GS}= ±20V, V_{DS}=0V	-	-	±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}= V_{GS}, I_D=250μA	1.0	1.8	2.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=10V, I_D=200mA	-	2.4	3.4	Ω
		V_{GS}=4.5V, I_D=200mA	-	2.65	3.6	
Diode Forward Voltage	V_{SD}	I_S=200mA, V_{GS}=0V	-	-	1.2	V
Gate resistance	R_G	f=1MHz,	-	5.5	-	Ω
Maximum Body-Diode Continuous Current	I_S		-	-	200	mA
Dynamic Parameters						
Input Capacitance	C_{iss}	V_{DS}=50V, V_{GS}=0V, f=1MHz	-	33	-	pF
Output Capacitance	C_{oss}		-	3.5	-	
Reverse Transfer Capacitance	C_{rss}		-	1	-	
Switching Parameters						
Total Gate Charge	Q_g	V_{GS}=10V, V_{DS}=50V, I_D=1A	-	1.8	-	nC
Gate-Source Charge	Q_{gs}		-	0.6	-	
Gate-Drain Charge	Q_{gd}		-	0.3	-	
Reverse Recovery Charge	Q_{rr}	I_F=1A, di/dt=100A/us	-	6	-	nC
Reverse Recovery Time	t_{rr}		-	20	-	ns
Turn-on Delay Time	$t_{D(on)}$	V_{GS}=10V, V_{DD}=50V, I_D=1A R_{GEN}=3Ω	-	4	-	ns
Turn-on Rise Time	t_r		-	20	-	
Turn-off Delay Time	$t_{D(off)}$		-	7	-	
Turn-off fall Time	t_f		-	31	-	

A. Repetitive rating; pulse width limited by max. junction temperature.
B. P_d is based on max. junction temperature, using junction-case thermal resistance.
C. The value of $R_{\theta JA}$ is measured with the dev TJ70.3 129.14 Tmen0 G[d)4( )-5(w5e)4(a)19(s)-6(u)4(r)5(e)]TJETQq0.000008881ns me dev T[d)4( )-5(w5e)4

Typical Electrical and Thermal Characteristics Diagrams

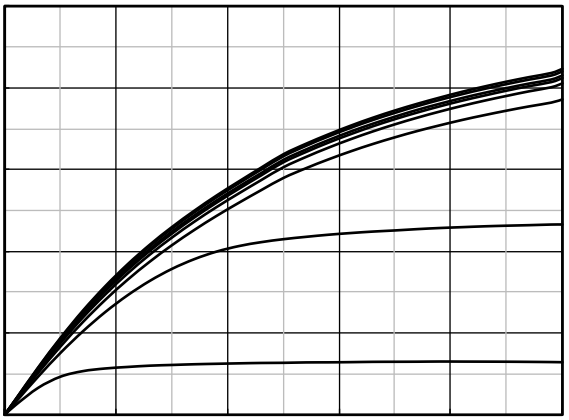


Figure 1. Output Characteristics

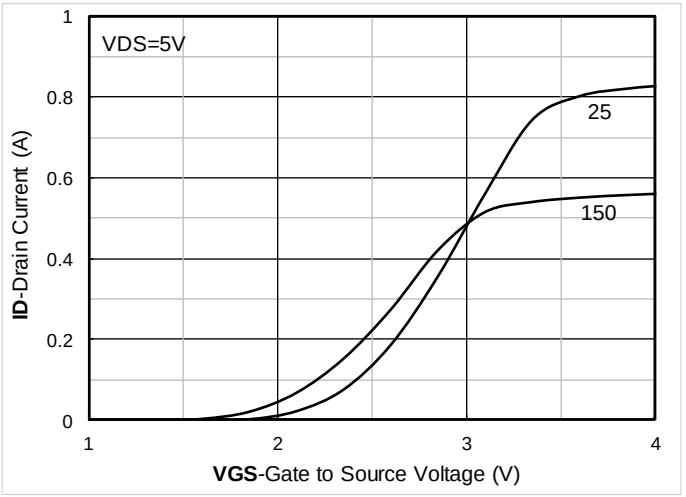


Figure 2. Transfer Characteristics

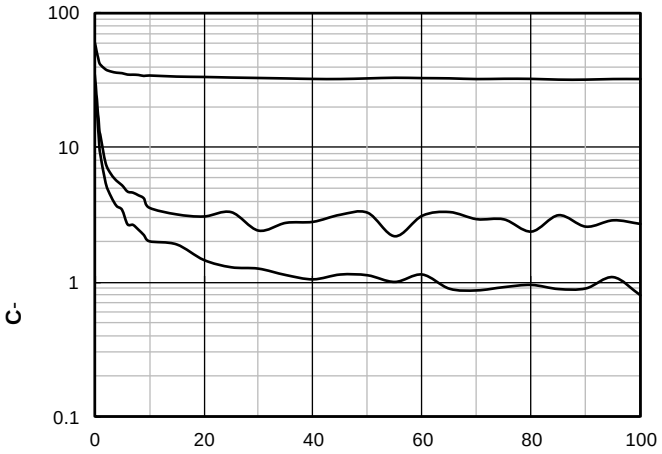


Figure 3. Capacitance Characteristics

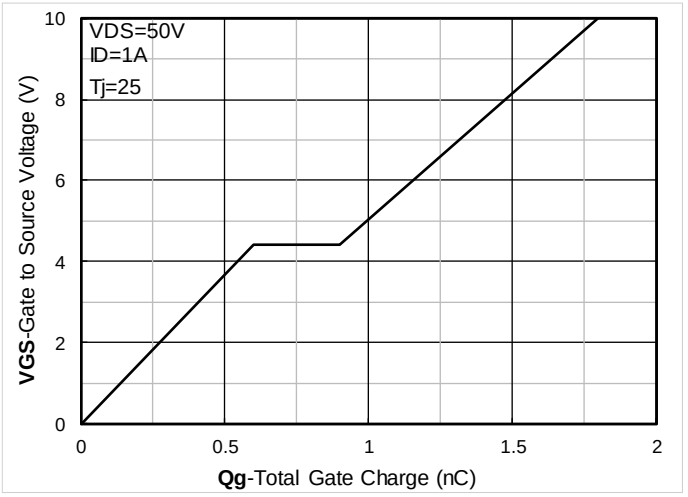


Figure 4. Gate Charge

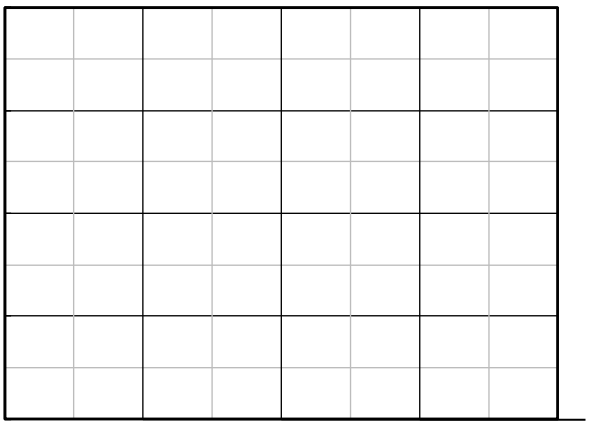


Figure 5. On-Resistance VS Gate to Source Voltage

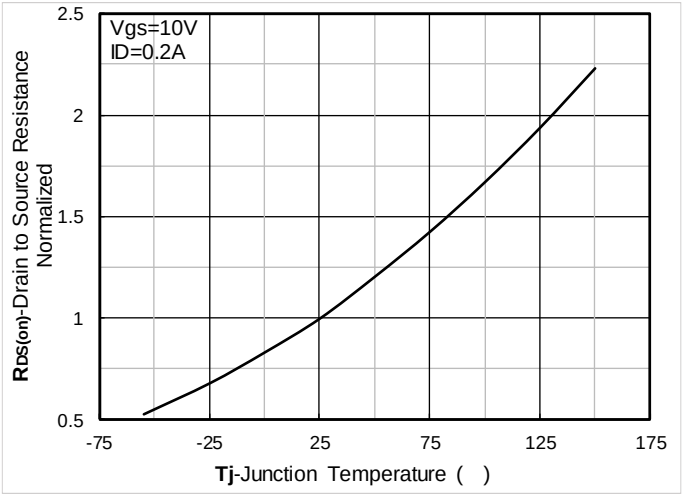
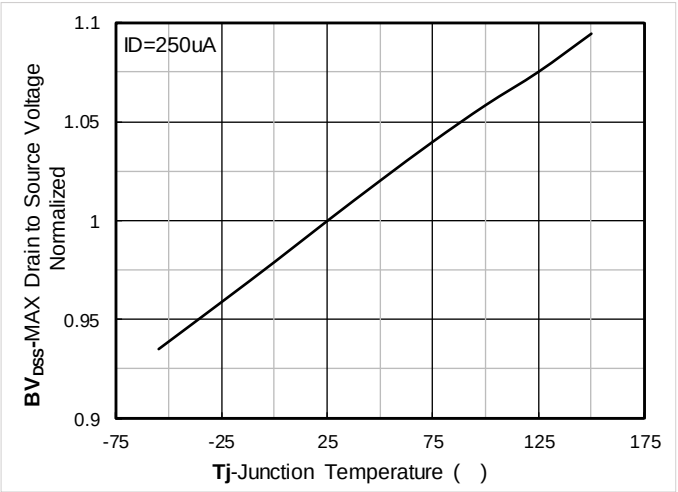


Figure 6. Normalized On-Resistance

Figure 7. $R_{DS(on)}$ VS Drain Current

Figure 8. Forward characteristics of reverse diode



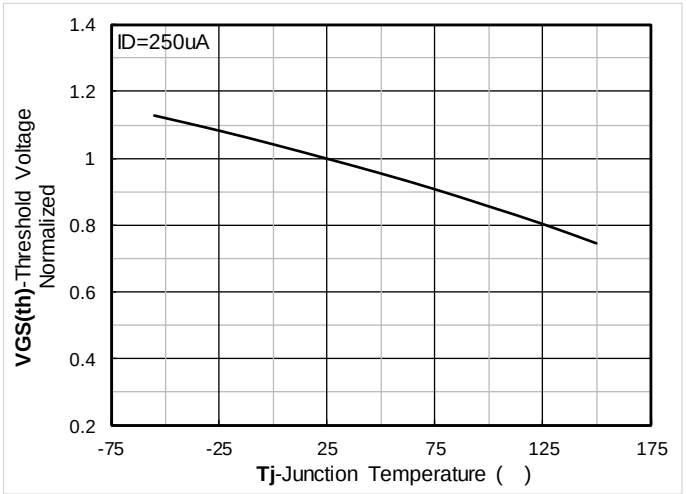
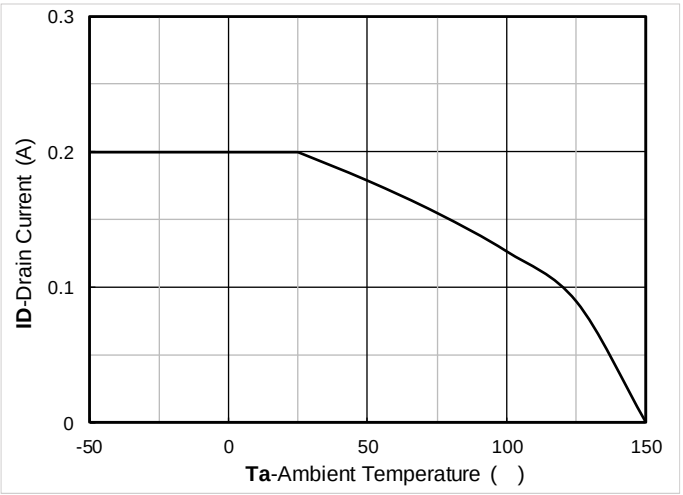


Figure 9. Normalized breakdown voltage

Figure 10. Normalized Threshold voltage



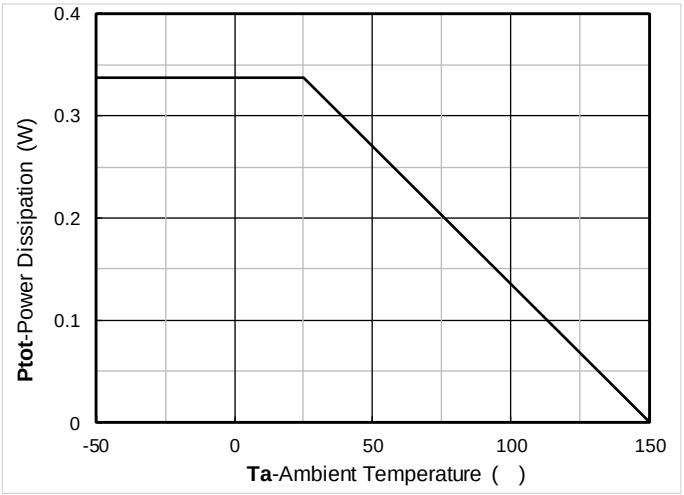
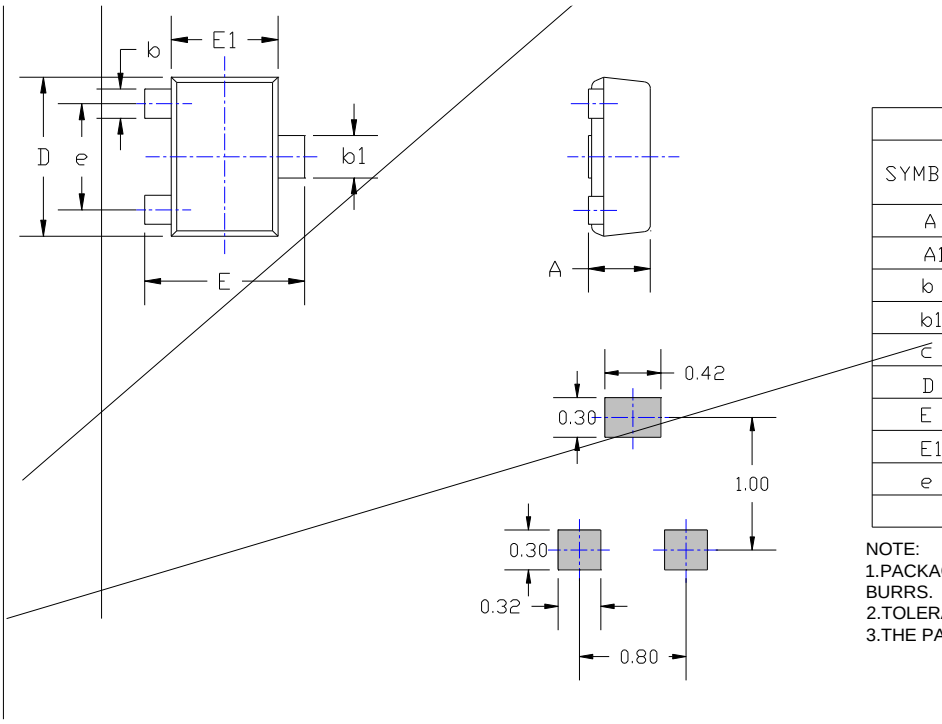


Figure 11. Current diss0 g G -0.00888 Tc[.)]TJETQq0.000008882 0 596.04 842.04 reW*0 GnS0 596.04 842.04 reW

BSS123T

■ SOT-723 Package information



DIMENSIONS			
SYMBOL	INCHES		Mi
	MIN.	MAX.	
A	0.017	0.022	
A1	0.000	0.002	
b		0.011	
b1			
c			
D			
E			
E1			
e			

NOTE:
1.PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
2.TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.
3.THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.

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