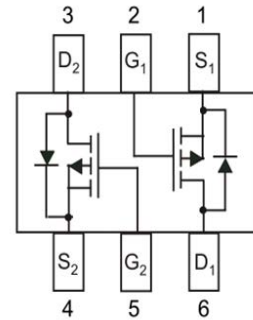
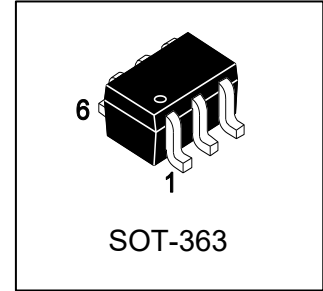


BSS84D

S-BSS84D

Power MOSFET
50V 130mA P-Channel SOT-363



1. FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.
- Energy Efficient
- Miniature SOT-363 Surface Mount Package Saves Board Space

2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
BSS84D	PD	3000/Tape&Reel

3. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Drain-Source Voltage	VDSS	-50	V
Gate-Source Voltage	VGS	±20	V
Drain Current — Continuous @ TA = 25°C	ID	-130	mA
Pulsed Drain Current (tp ≤ 10 μs)	IDM	-520	mA

4. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Total Device Dissipation, @ TA = 25°C	PD	380	mW
Thermal Resistance, Junction-to-Ambient	RθJA	328	°C/W
Operating, Junction and Storage temperature range	TJ, Tstg	-55~+150	°C
Maximum Lead Temperature for Soldering Purposes, for 10 seconds	TL	260	°C



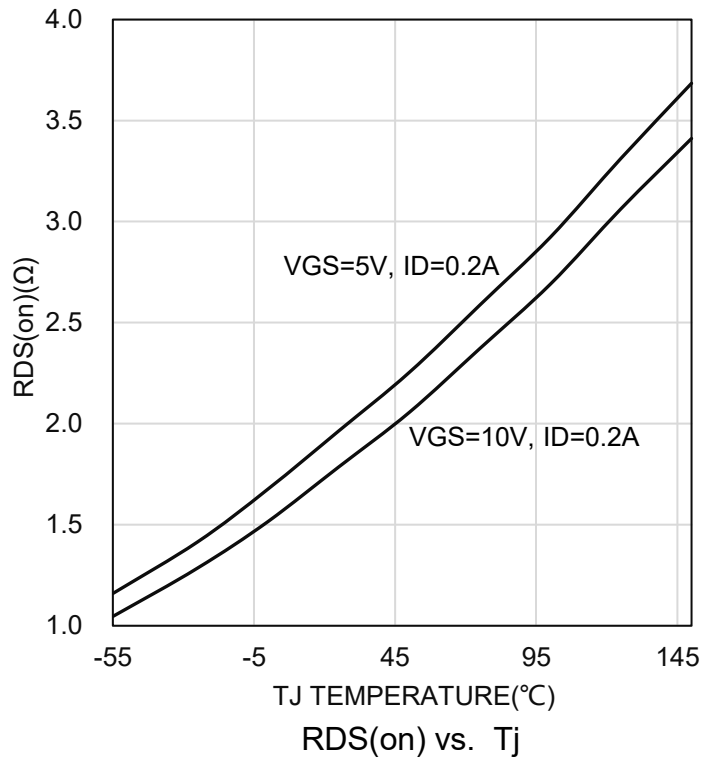
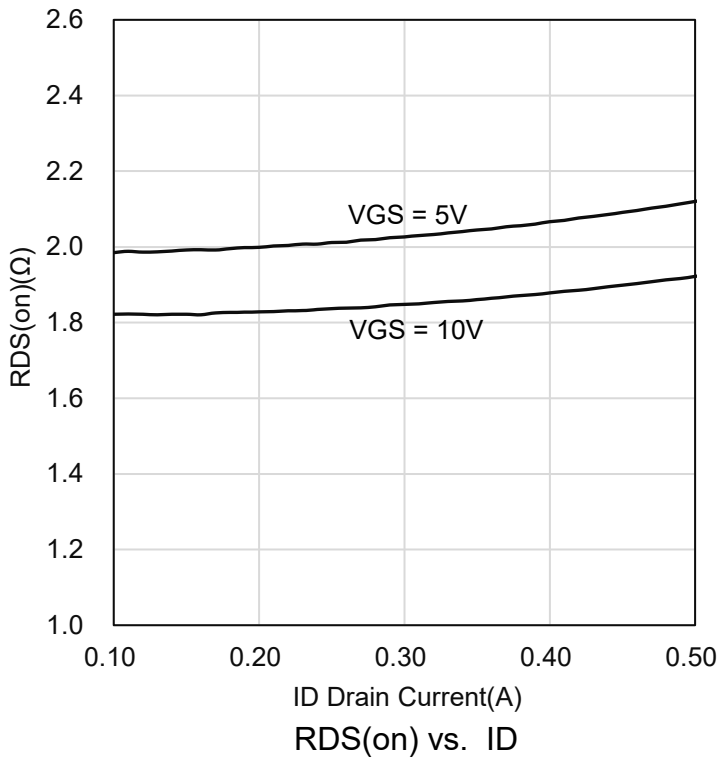
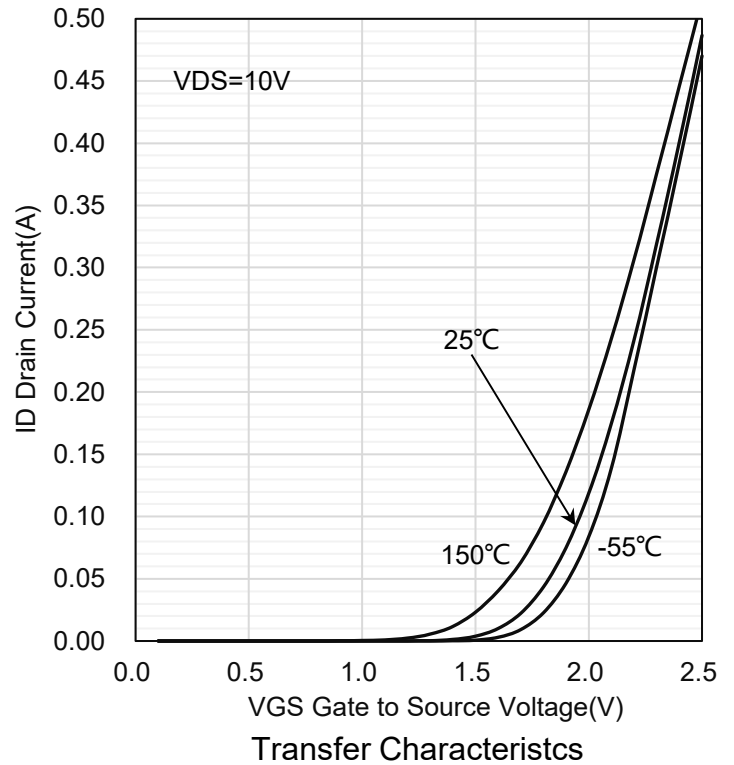
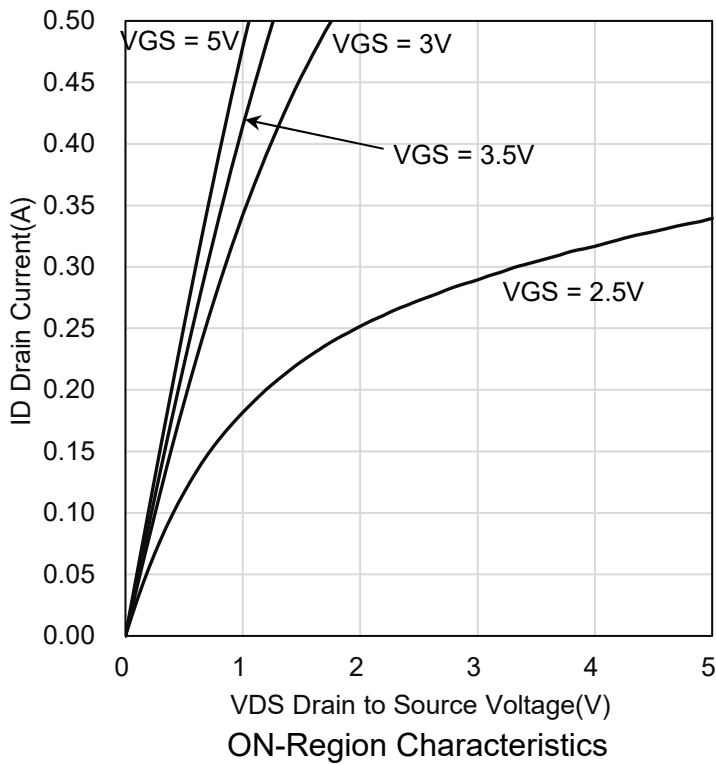
5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic		Symbol	Min.	Typ.	Max.	Unit
Drain–Source Breakdown Voltage (VGS = 0, ID = -250μA)		VBRDSS	-50	-	-	V
Zero Gate Voltage Drain Current (VDS = -25 V, VGS = 0 V) (VDS = -50 V, VGS = 0 V) (VDS = -50 V, VGS = 0 V, TJ = 125°C)		IDSS	-	-	-0.1 -15 -60	μA
Gate–Body Leakage Current (VGS = ±20 V, VDS=0V)		IGSS	-	-	±100	nA
Gate–Source Threshold Voltage (VDS = VGS, ID = -250μA)		VGS(th)	-0.8	-	-2.0	V
Drain–Source On–State Resistance (VGS = -5.0 V, ID = -100 mA) (VGS = -10 V, ID = -100 mA)		RDS(on)	-	2 2	6 5	Ω
Gate Charge		QT	-	6000	-	pC
Turn-On Delay Time	(VDS = -15V, RL = 50Ω, VGS = -10V, RG = 25 Ω)	td(on)	-	16.7	-	ns
Rise Time		tr	-	8.6	-	
Turn-Off Delay Time		td(off)	-	17.9	-	
Fall Time		tf	-	5.3	-	
Input Capacitance	(VDS = -5V, VGS = 0V, f=1MHz)	Ciss	-	42	-	pF
Output Capacitance		Coss	-	20	-	
Reverse Transfer Capacitance		Crss	-	4	-	

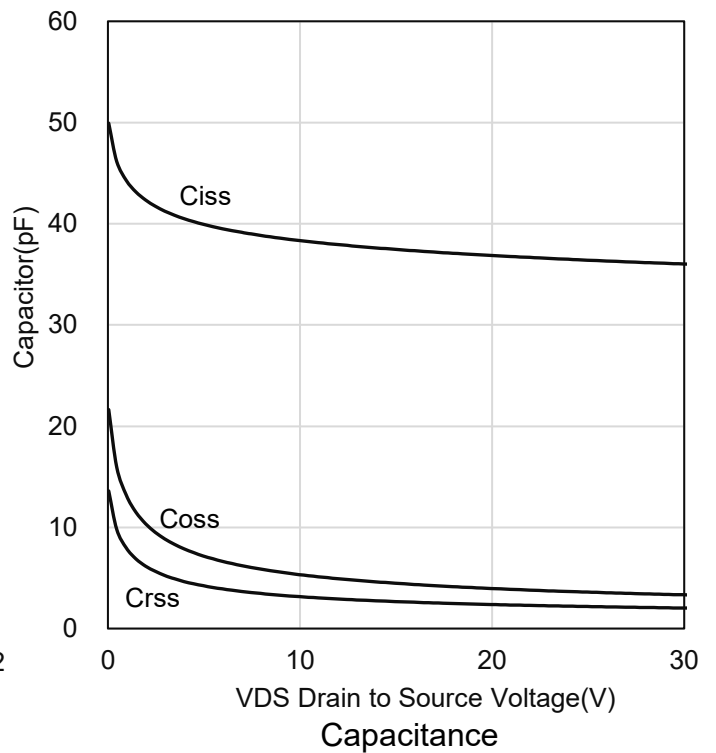
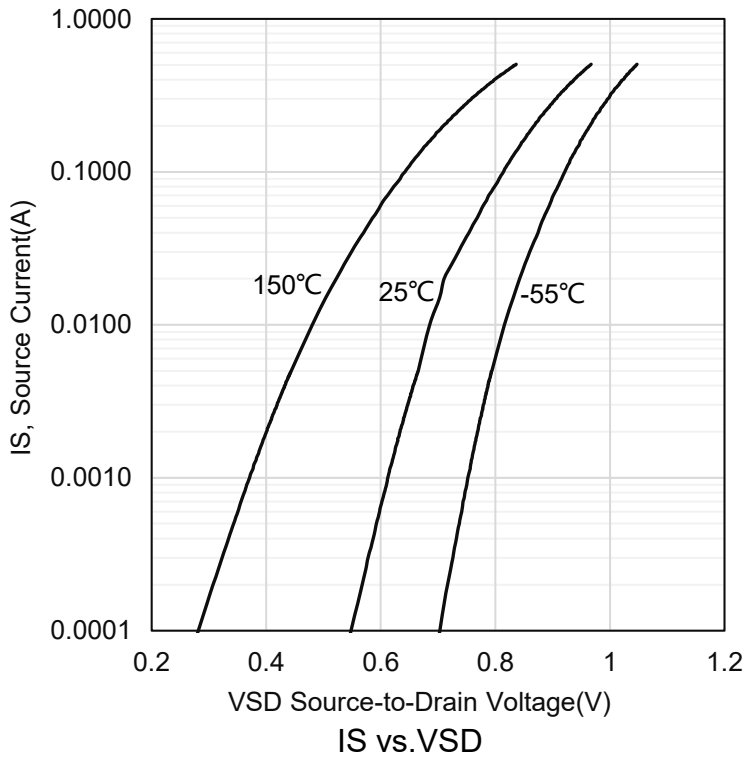
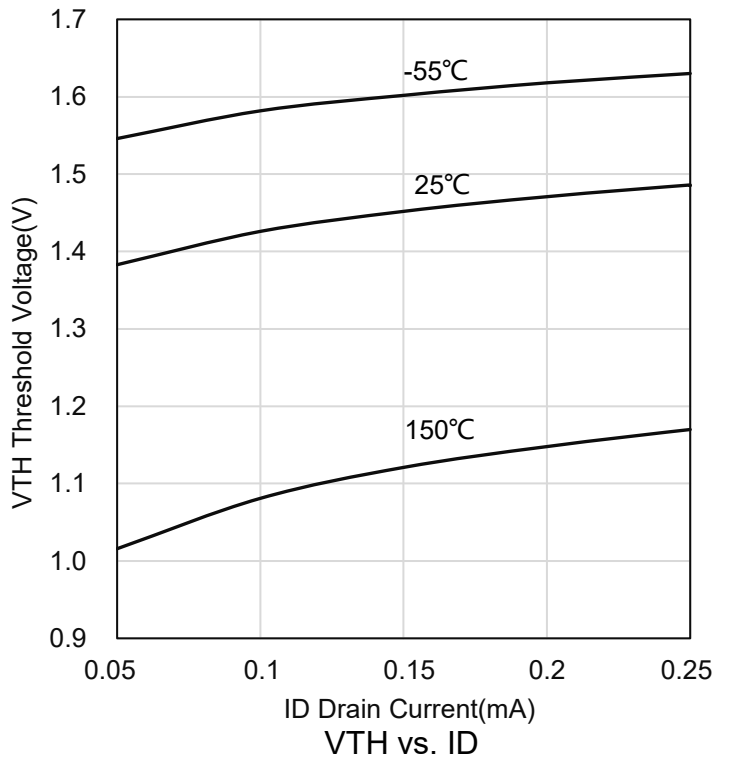
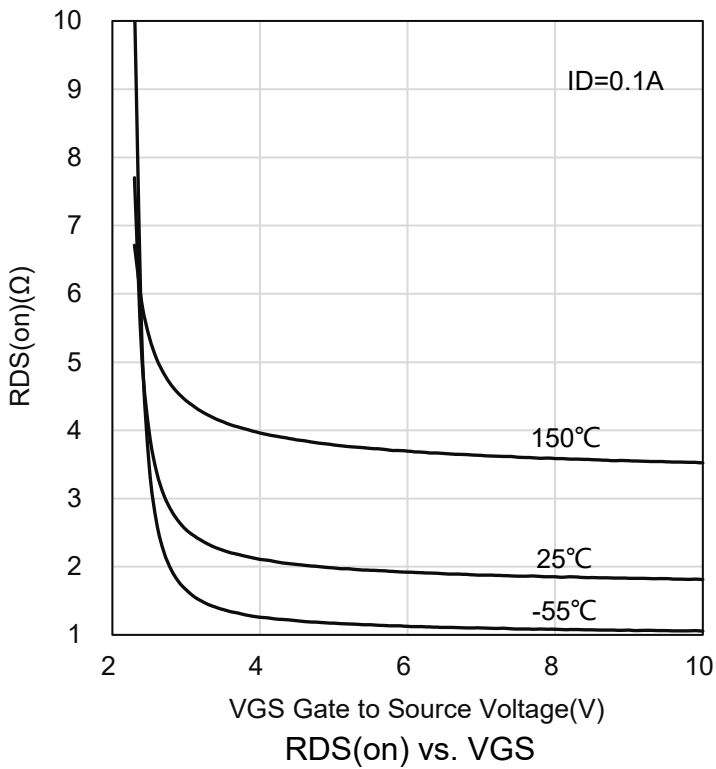
1. Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 2.0%.



6.ELECTRICAL CHARACTERISTICS CURVES



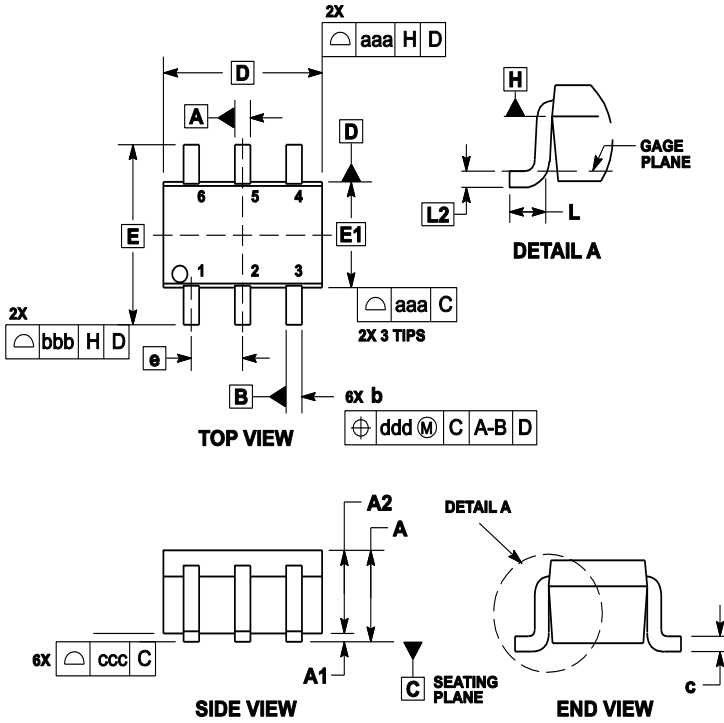
6.ELECTRICAL CHARACTERISTICS CURVES(Con.)



7. OUTLINE AND DIMENSIONS

Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E1 DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	---	---	1.10	---	---	0.043
A1	0.00	---	0.10	0	---	0.004
A2	0.70	0.90	1.00	0.027	0.035	0.039
b	0.15	0.20	0.25	0.006	0.008	0.01
C	0.08	0.15	0.22	0.003	0.006	0.009
D	1.80	2.00	2.20	0.07	0.078	0.086
E	2.00	2.10	2.20	0.078	0.082	0.086
E1	1.15	1.25	1.35	0.045	0.049	0.053
e	0.65 BSC			0.026 BSC		
L	0.26	0.36	0.46	0.010	0.014	0.018
L2	0.15 BSC			0.006 BSC		
aaa	0.15			0.01		
bbb	0.30			0.01		
ccc	0.10			0.00		
ddd	0.10			0.00		

8. SOLDERING FOOTPRINT

