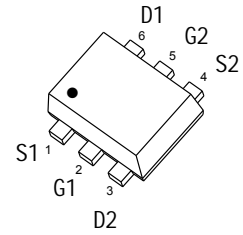


### 1. FEATURES

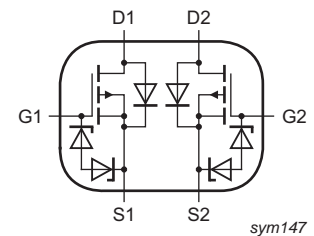
- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- Energy Efficient
- Miniature SOT-563 Surface Mount Package Saves Board Space



**SOT-563**

### 2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
BSS84AKV	EG	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	-170	mA
Pulsed Drain Current (tp ≤ 10 μs)	IDM	-520	mA

### 4. THERMAL CHARACTERISTICS

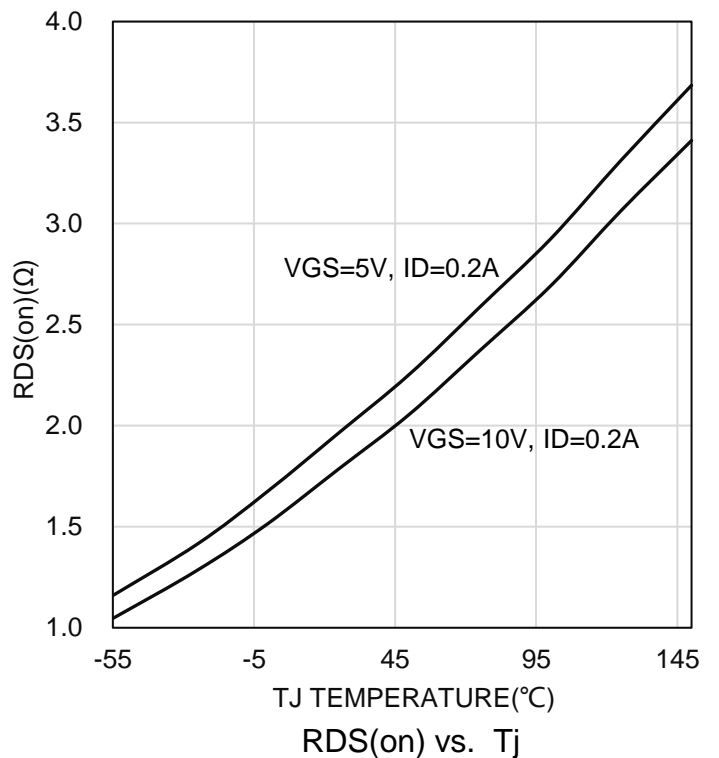
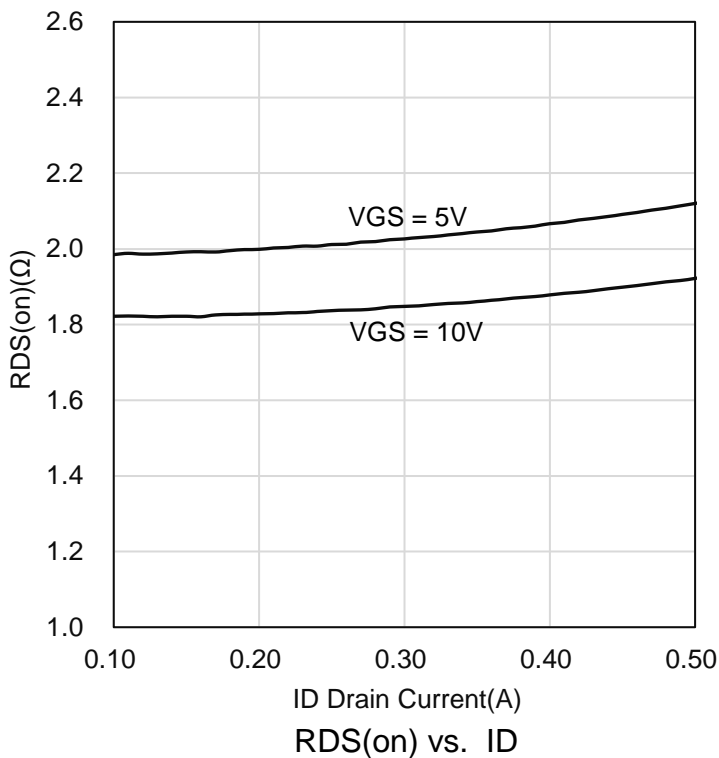
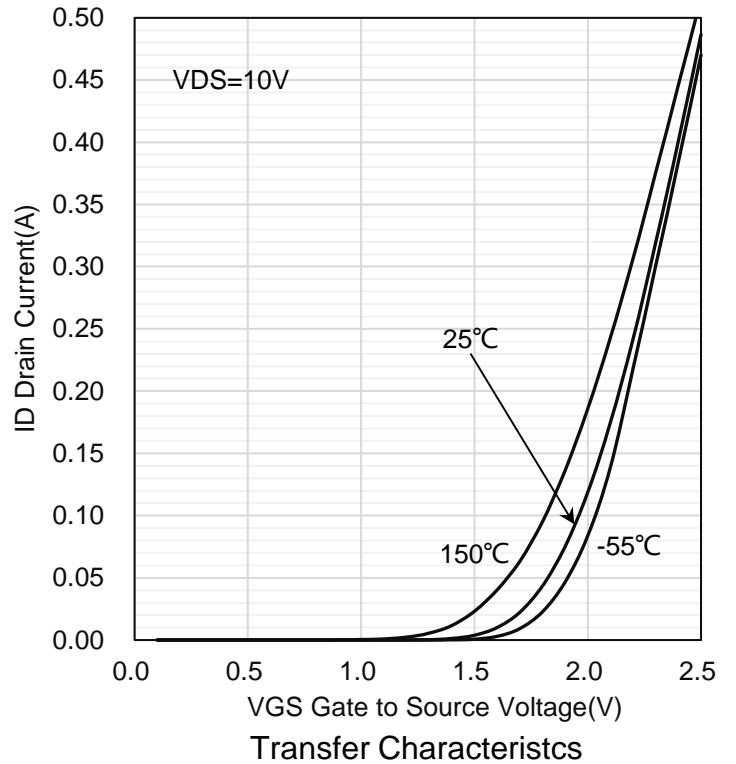
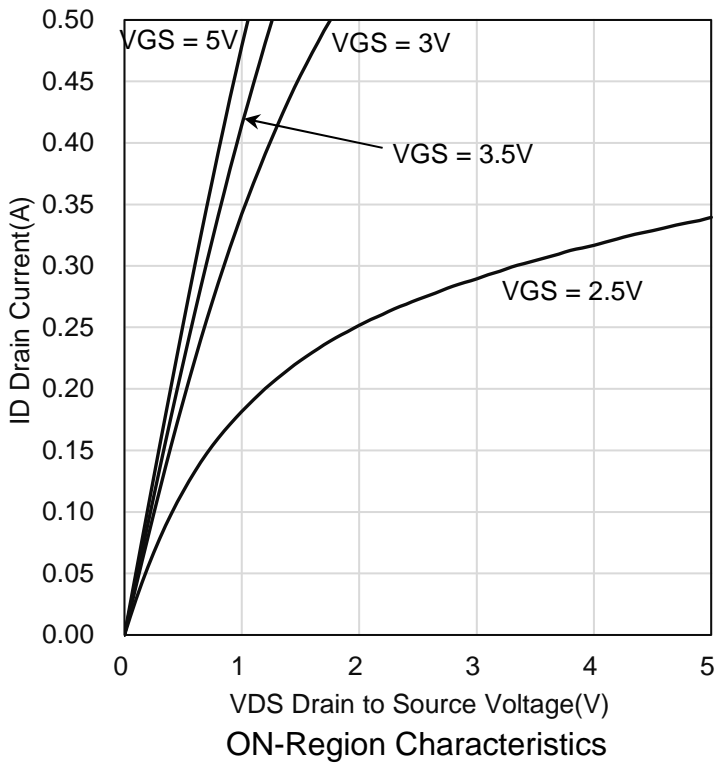
Parameter	Symbol	Limits	Unit
Total Device Dissipation, @ TA = 25°C	PD	380	mW
Thermal Resistance, Junction–to–Ambient	ROJA	328	°C/W
Operating, Junction and Storage temperature range	TJ, Tstg	-55~+150	°C
Maximum Lead Temperature for Soldering Purposes, for 10 seconds	TL	260	°C

### 5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

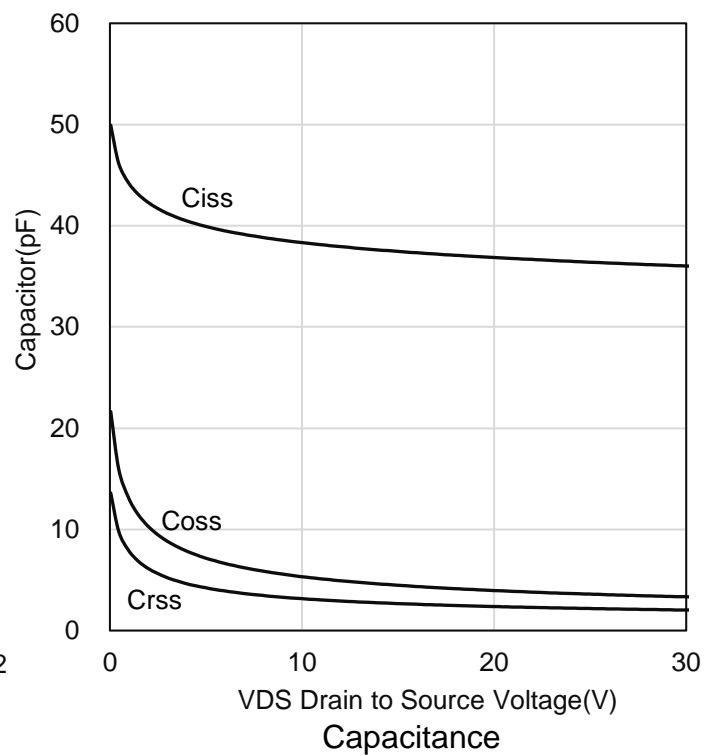
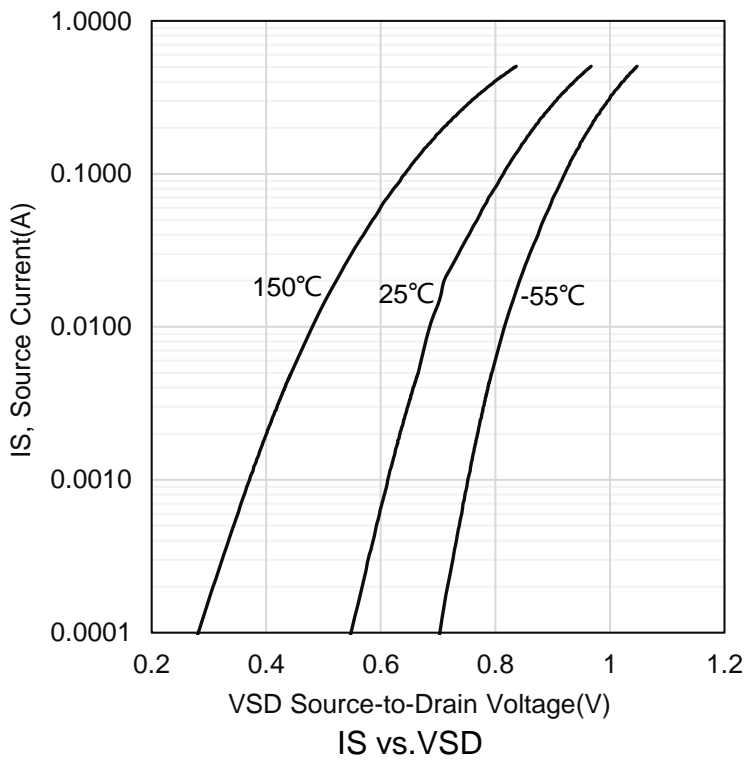
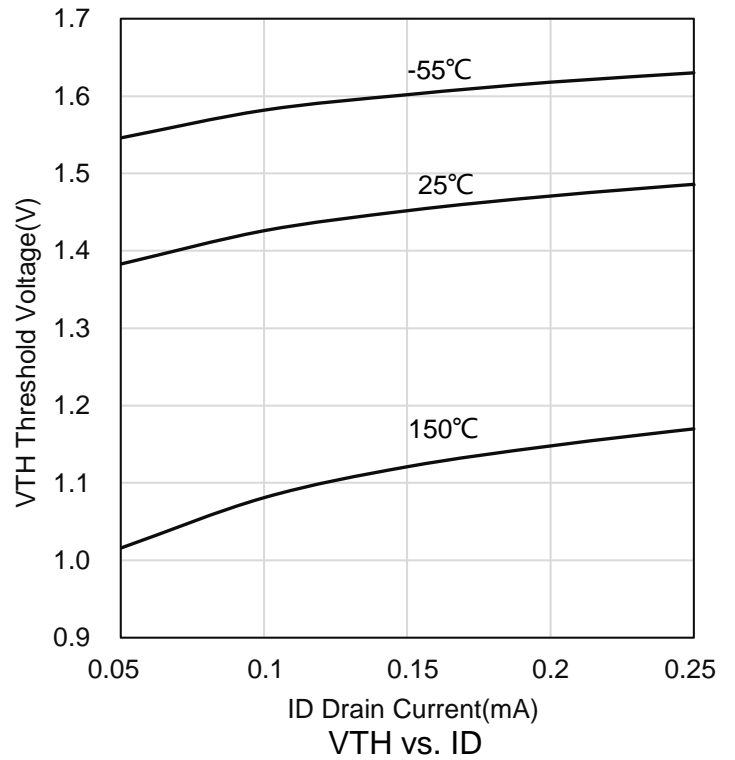
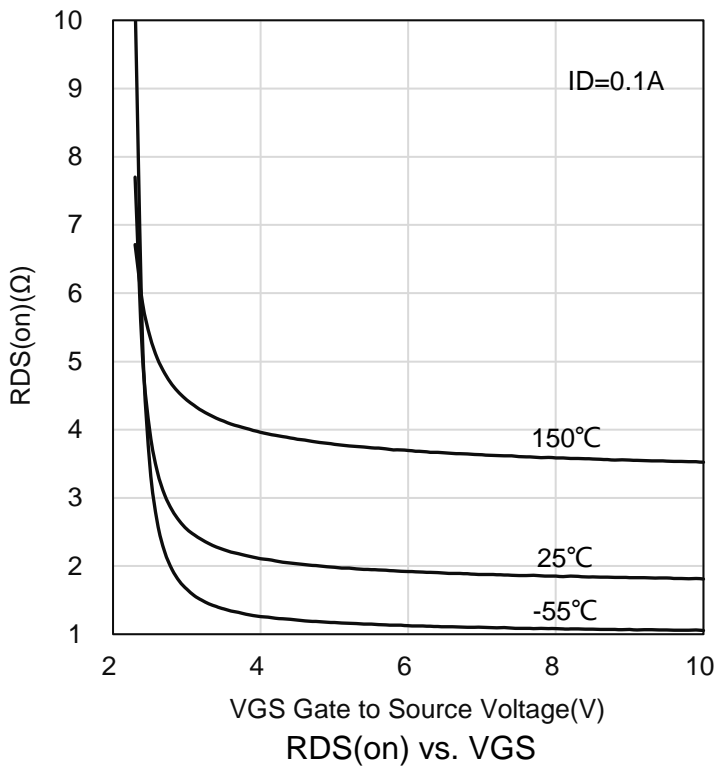
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Drain–Source Breakdown Voltage (VGS = 0, ID = -250μA)	VBRDSS	-50	-	-	V
Zero Gate Voltage Drain Current (VDS = -40 V, VGS = 0 V) (	IDSS	-	-	-1	μA
Gate–Body Leakage Current (VGS = ±20 V, VDS=0V)	IGSS	-	-	±10	μA
Gate–Source Threshold Voltage (VDS = VGS, ID = -250μA)	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	6	Ω
Gate Charge	QT	-	6000	-	pC
Turn-On Delay Time	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	Ciss	-	42	-	pF
Output Capacitance	Coss	-	20	-	
Reverse Transfer Capacitance	Crss	-	4	-	

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

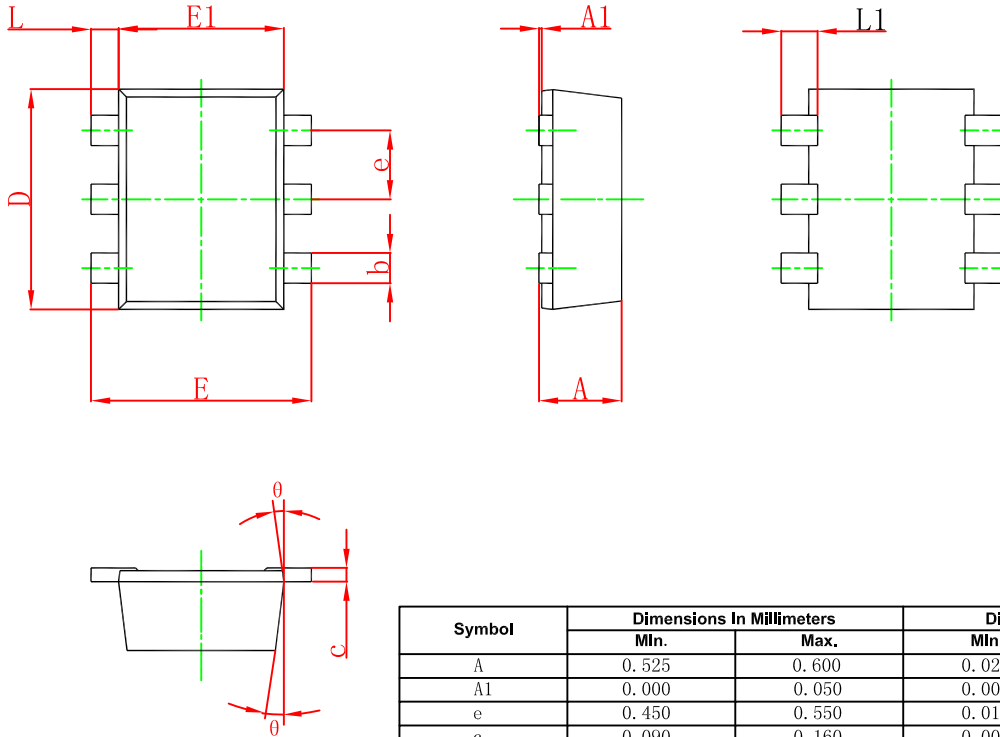
## 6.ELECTRICAL CHARACTERISTICS CURVES



6.ELECTRICAL CHARACTERISTICS CURVES(Con.)

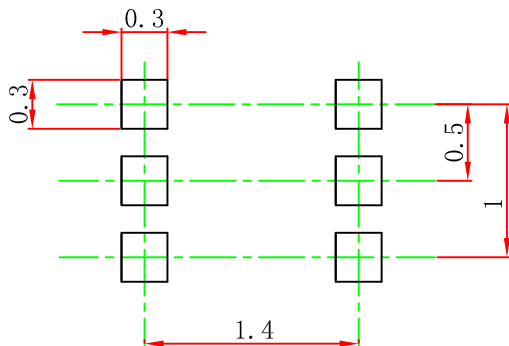


### SOT-563 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.525	0.600	0.021	0.024
A1	0.000	0.050	0.000	0.002
e	0.450	0.550	0.018	0.022
c	0.090	0.160	0.004	0.006
D	1.500	1.700	0.059	0.067
b	0.170	0.270	0.007	0.011
E1	1.100	1.300	0.043	0.051
E	1.500	1.700	0.059	0.067
L	0.100	0.300	0.004	0.012
L1	0.200	0.400	0.008	0.016
theta	7 <sup>0</sup> REF.		7 <sup>0</sup> REF.	

### SOT-563 Suggested Pad Layout



**Note:**

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$ mm.
3. The pad layout is for reference purposes only.