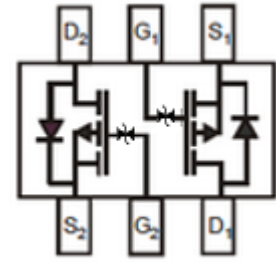


Features

- Low on-resistance
- High-speed switching
- Drive circuits can be simple
- Parallel use is easy
- ESD protected gate up to 1KV HBM

HF

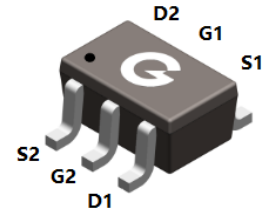


Typical Applications

- P-channel enhancement mode effect transistor
- Switching application

Mechanical Data

- Case: SOT-363
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



SOT-363

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BSS84EDW	SOT-363	3000 pcs / Tape & Reel	EK84

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Drain-to-Source Voltage	V _{DSS}	-50	V
Gate-to-Source Voltage	V _{GSS}	±20	V
Continuous Drain Current	I _D	-130	mA
Pulsed Drain Current *4	I _{DM}	-520	mA

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	0.3	W
Thermal Resistance Junction-to-Air	R _{θJA}	417	°C/W
Operating Junction Temperature Range	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
V_{DSS}	Drain-Source Breakdown Voltage	$V_{GS} = 0V, I_D = -250\mu A$	-50	-	-	V
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS} = -50V, V_{GS} = 0V$	-	-	-1	μA
I_{GSS}	Gate-Body Leakage Current	$V_{GS} = \pm 20V, V_{DS} = 0V$	-	-	± 10	μA
On Characteristics ^{*2}						
$R_{DS(ON)}$	Static Drain-Source On-resistance	$V_{GS} = -5V, I_D = -0.1A$	-	3	6	Ω
		$V_{GS} = -10V, I_D = -0.13A$	-	2	4	
$V_{GS(TH)}$	Gate Threshold Voltage	$V_{DS} = V_{GS}, I_D = -250\mu A$	-1	-	-2	V
Dynamic Characteristics ^{*3}						
C_{ISS}	Input Capacitance	$V_{GS} = 0V$ $V_{DS} = -20V$ $f = 1.0MHz$	-	32	-	μF
C_{OSS}	Output Capacitance		-	16	-	
C_{RSS}	Reverse Transfer Capacitance		-	4	-	
Source-Drain Diode Characteristics						
V_{SD}	Diode Forward Voltage ^{*2}	$I_S = -0.26A, V_{GS} = 0V$	-	-0.8	-1.4	V
I_S	Maximum Body-Diode Continuous Current	$T_C = 25^\circ\text{C}$	-	-	-0.3	A

Notes:

- 1、 Surface mounted on FR4 board, and standard footprint, $t \leq 10$ sec
- 2、 Pulse test: pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$
- 3、 Guaranteed by design, not subject to production
- 4、 Pulse width limited by maximum junction temperature

Ratings and Characteristics Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

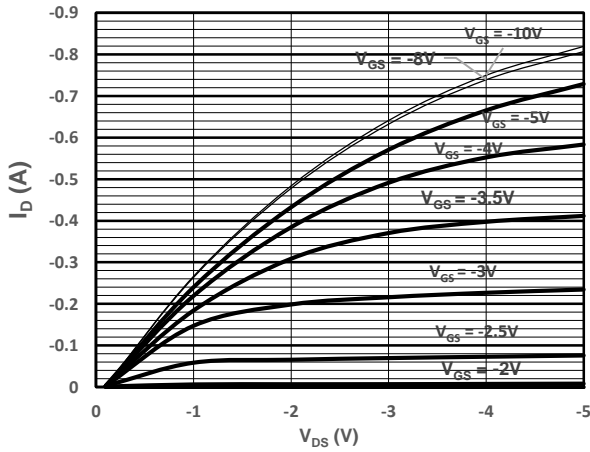


Fig 1 On-Region Characteristics

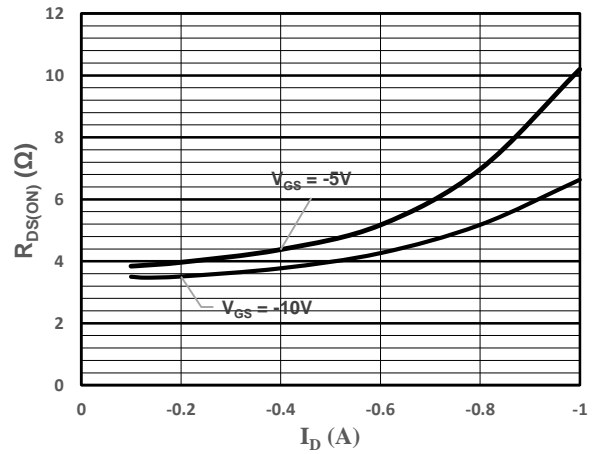


Fig 2 On-Resistance vs. Drain Current and Gate Voltage

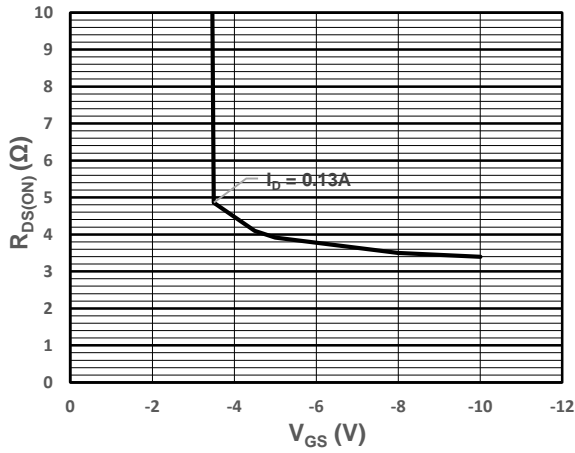


Fig 3 On-Resistance vs. Gate-Source Voltage

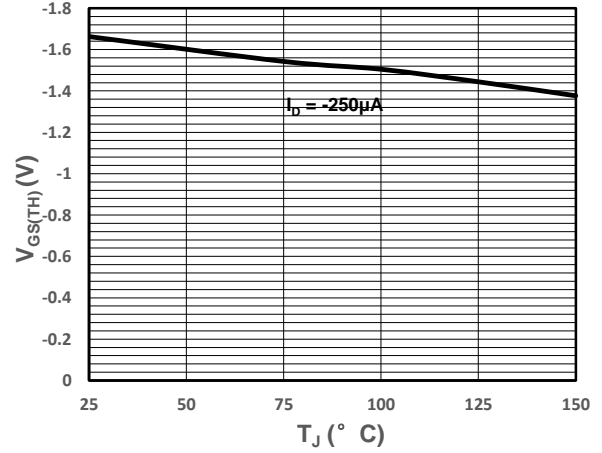


Fig 4 Gate Voltage vs. Junction Temperature

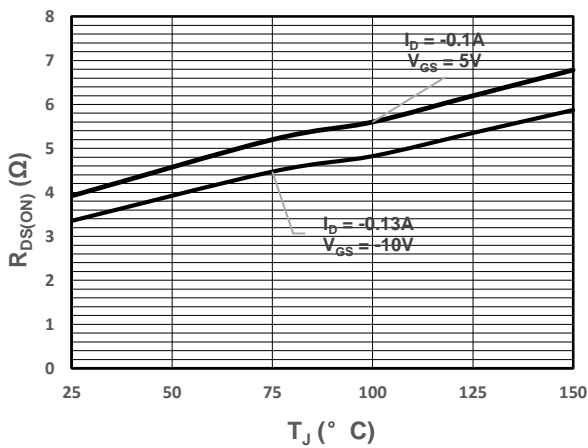


Fig 5 On-Resistance vs. Junction Temperature

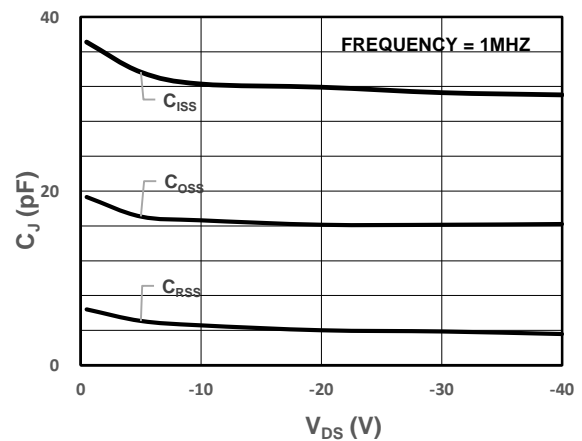
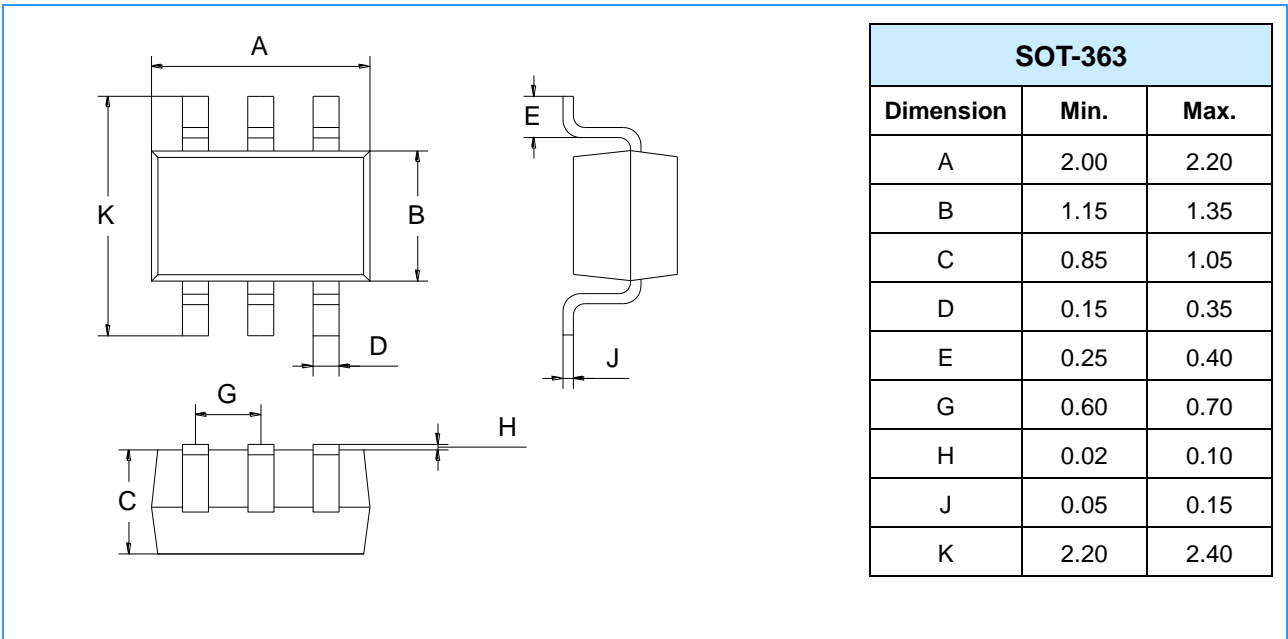
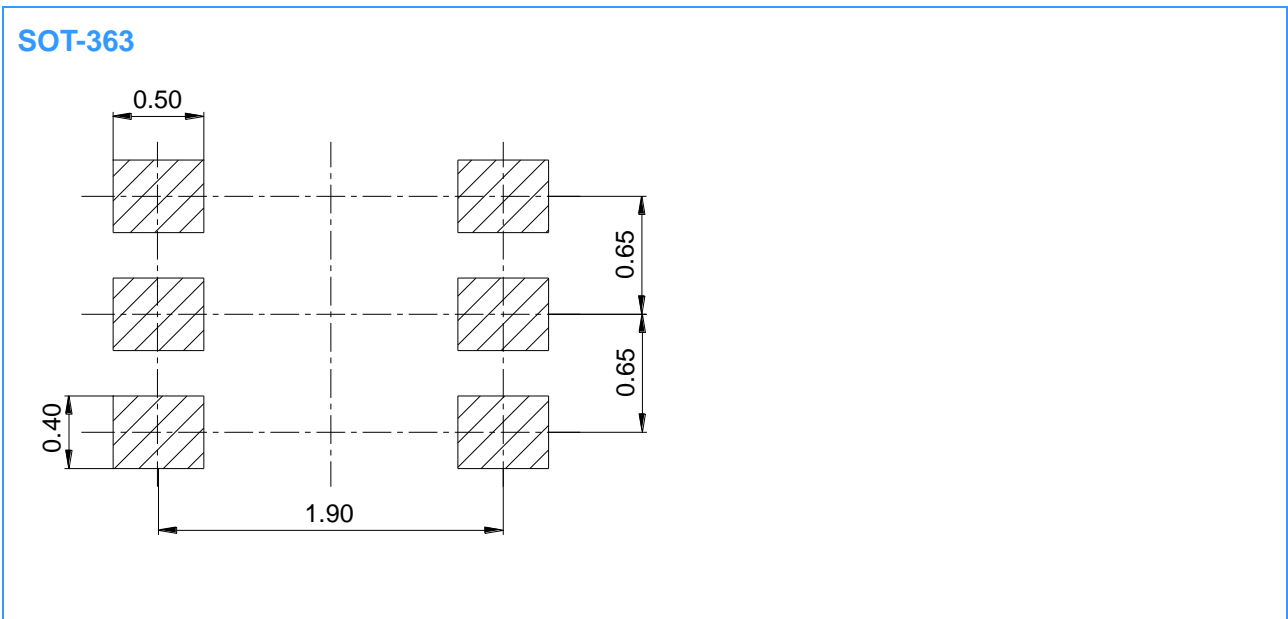


Fig 6 Capacitance Characteristics

Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)



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