

2SJ315

DC-DC CONVERTER

- 4-Volt Gate Drive
- Low Drain-Source ON Resistance : $R_{DS(ON)} = 0.25 \Omega$ (Typ.)
- High Forward Transfer Admittance : $|Y_{fs}| = 3.0 S$ (Typ.)
- Low Leakage Current : $I_{DSS} = -100 \mu A$ (Max.) ($V_{DS} = -60 V$)
- Enhancement-Mode : $V_{th} = -0.8 \sim -2.0 V$
($V_{DS} = -10 V, I_D = -1 mA$)

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Drain-Source Voltage		V_{DSS}	-60	V
Drain-Gate Voltage ($R_{GS} = 20 k\Omega$)		V_{DGR}	-60	V
Gate-Source Voltage		V_{GSS}	± 20	V
Drain Current	DC	I_D	-5	A
	Pulse	I_{DP}	-20	
Drain Power Dissipation ($T_c = 25^\circ C$)		P_D	20	W
Channel Temperature		T_{ch}	150	°C
Storage Temperature Range		T_{stg}	-55~150	°C

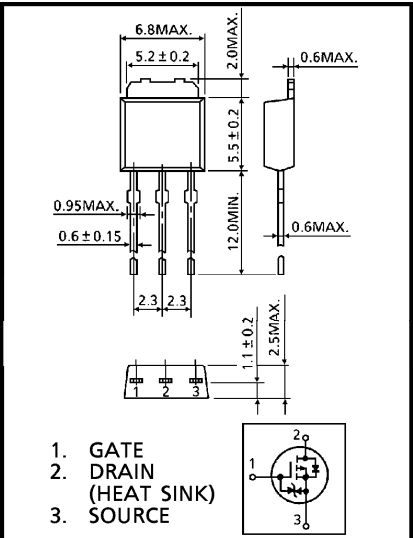
THERMAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	MAX.	UNIT
Thermal Resistance, Channel to Case	$R_{th(ch-c)}$	6.25	°C / W
Thermal Resistance, Channel to Ambient	$R_{th(ch-a)}$	125	°C / W

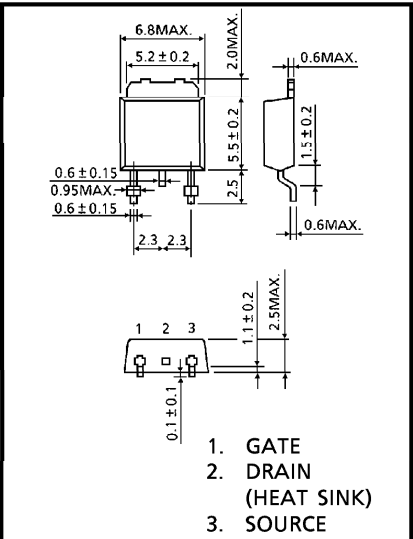
This transistor is an electrostatic sensitive device.
Please handle with caution.

INDUSTRIAL APPLICATIONS

Unit in mm



JEDEC	—
EIAJ	SC-64
TOSHIBA	2-7B1B



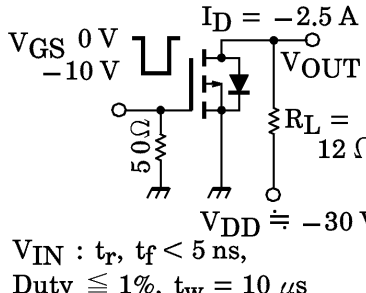
JEDEC	—
EIAJ	SC-64
TOSHIBA	2-7B2B

Weight : 0.36 g

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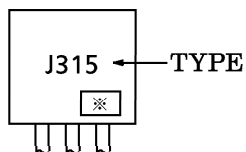
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		I _{GSS}	V _{GS} = ±16 V, V _{DS} = 0 V	—	—	±10	μA
Drain Cut-off Current		I _{DSS}	V _{DS} = -60 V, V _{GS} = 0 V	—	—	-100	μA
Drain-Source Breakdown Voltage		V _{(BR)DSS}	I _D = -10 mA, V _{GS} = 0 V	-60	—	—	V
Gate Threshold Voltage		V _{th}	V _{DS} = -10 V, I _D = -1 mA	-0.8	—	-2.0	V
Drain-Source ON Resistance		R _{DS(ON)}	V _{GS} = -4 V, I _D = -2.5 A	—	0.31	0.40	Ω
			V _{GS} = -10 V, I _D = -2.5 A	—	0.21	0.25	
Forward Transfer Admittance		Y _{fs}	V _{DS} = -10 V, I _D = -2.5 A	1.8	3.0	—	S
Input Capacitance		C _{iss}	V _{DS} = -10 V, V _{GS} = 0 V, f = 1 MHz	—	500	—	pF
Reverse Transfer Capacitance		C _{rss}		—	90	—	
Output Capacitance		C _{oss}		—	290	—	
Switching Time	Rise Time	t _r		—	20	—	ns
	Turn-on Time	t _{on}		—	30	—	
	Fall Time	t _f		—	30	—	
	Turn-off Time	t _{off}		—	140	—	
Total Gate Charge (Gate-Source Plus Gate-Drain)		Q _g	V _{DD} ≐ -48 V, V _{GS} = -10 V, I _D = -5 A	—	20	—	nC
Gate-Source Charge		Q _{gs}		—	13	—	
Gate-Drain ("Miller") Charge		Q _{gd}		—	7	—	

SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Continuous Drain Reverse Current	I _{DR}	—	—	—	-5	A
Pulse Drain Reverse Current	I _{DRP}	—	—	—	-20	A
Diode Forward Voltage	V _{DSF}	I _{DR} = -5 A, V _{GS} = 0 V	—	—	1.5	V

MARKING



※ Lot Number


 Month (Starting from Alphabet A)


 Year (Last Number of the Christian Era)