

PRELIMINARY

Notice : This is not a final specification
Some parametric are subject to change.

INJ0503BC2

Switching
Silicon P-channel MOSFET

DESCRIPTION

INJ0503BC2 is a Silicon P-channel MOSFET.

This product is most suitable for use such as portable machinery,
because of low voltage drive and low on resistance.

FEATURE

- High drain current $I_D = -5.1A$
- Drive voltage $-2.5V$
- Low on Resistance. $R_{DS(ON)} = 35m\Omega$ typ(@ $V_{GS} = -4.5V$).
 $R_{DS(ON)} = 45m\Omega$ typ(@ $V_{GS} = -2.5V$).

APPLICATION

Switching.

MAXIMUM RATINGS ($T_a = 25^\circ C$)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	± 12	V
Drain Current(DC) (※1)	I_D	-5.1	A
Drain Current(Pulse) (※2)	I_{DP}	-16	A
Total Power Dissipation (※1)	P_D	1.5	W
Channel Temperature	T_{ch}	+150	$^\circ C$
Storage Temperature	T_{stg}	-55~+150	$^\circ C$

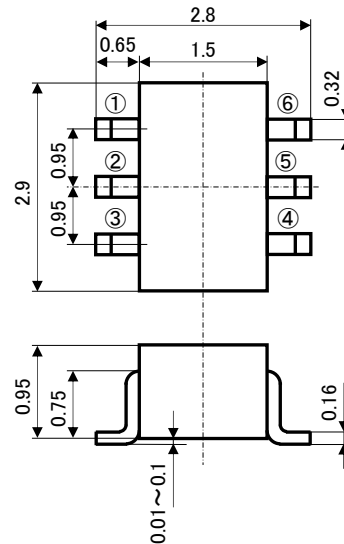
※1 package mounted on glass-epoxy substrate.

(39mm × 39mm × 1.6mm, Cu pad 1500mm²)

※2 $P_w \leq 10ms$, Duty cycle $\leq 1\%$

OUTLINE DRAWING

Unit : mm

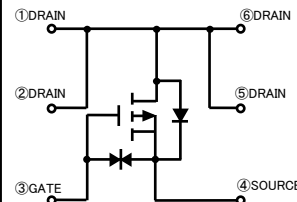


JEITA: Low-profile SC-74(SC-95)
JEDEC: SOT23-6L

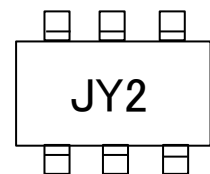
TERMINAL CONNECTOR

- ① : DRAIN
- ② : DRAIN
- ③ : GATE
- ④ : SOURCE
- ⑤ : DRAIN
- ⑥ : DRAIN

EQUIVALENT CIRCUIT



MARKING



ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

Parameter	Symbol	Test Condition	Limit			Unit
			MIN	TYP	MAX	
Drain-Source Breakdown Voltage	$V_{(BR)DS}$	$I_D = -250\mu A$, $V_{GS} = 0V$	-20	-	-	V
Gate-Source Leak Current	I_{GSS}	$V_{GS} = \pm 12V$, $V_{DS} = 0V$	-	-	± 25	μA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -20V$, $V_{GS} = 0V$	-	-	-1.0	μA
Gate Threshold Voltage	V_{th}	$I_D = -250\mu A$, $V_{DS} = V_{GS}$	-0.5	-	-1.2	V
Static Drain-Source On-State Resistance	$R_{DS(ON)}$	$I_D = -5.1A$, $V_{GS} = -4.5V$	-	35	45	$m\Omega$
		$I_D = -5.1A$, $V_{GS} = -2.5V$	-	45	60	$m\Omega$
Input Capacitance	C_{iss}	$V_{DS} = -10V$, $V_{GS} = 0V$, $f = 1MHz$	-	1000	-	pF
Output Capacitance	C_{oss}		-	130	-	
Feedback Capacitance	C_{rss}		-	90	-	
Switching Time	t_{on}	$V_{DD} = -20V$, $I_D = -200mA$, $V_{GS} = -5V$	-	100	-	ns
	t_{off}		-	1050	-	

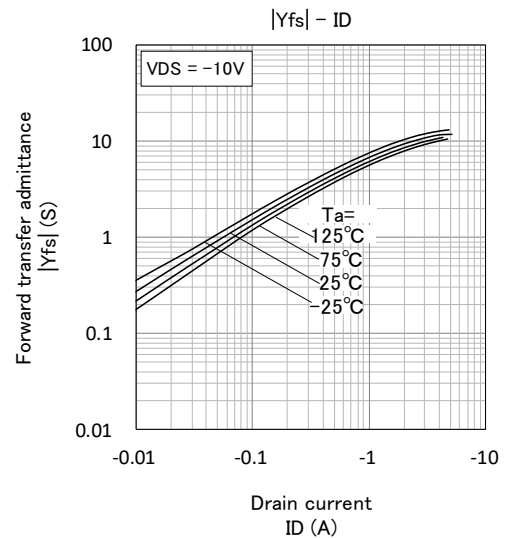
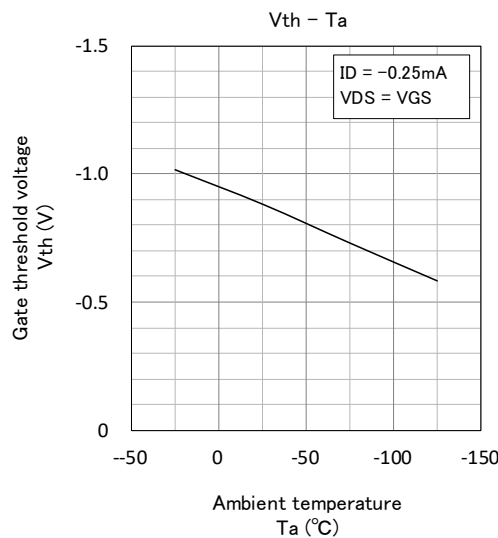
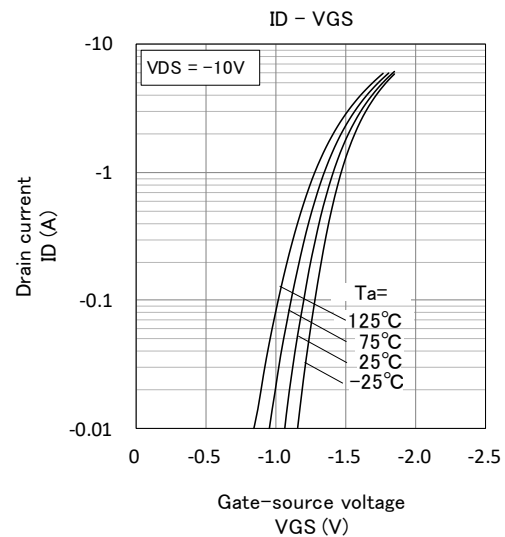
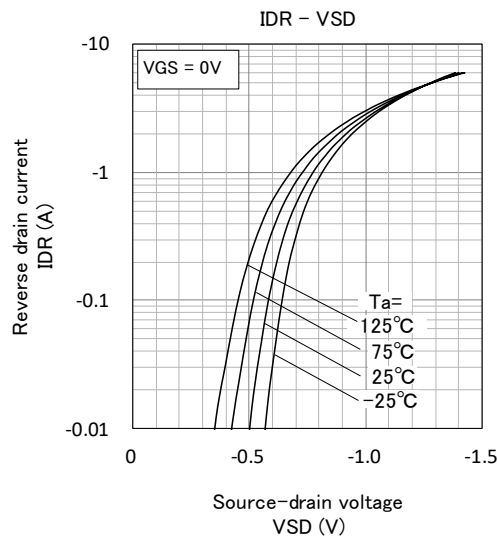
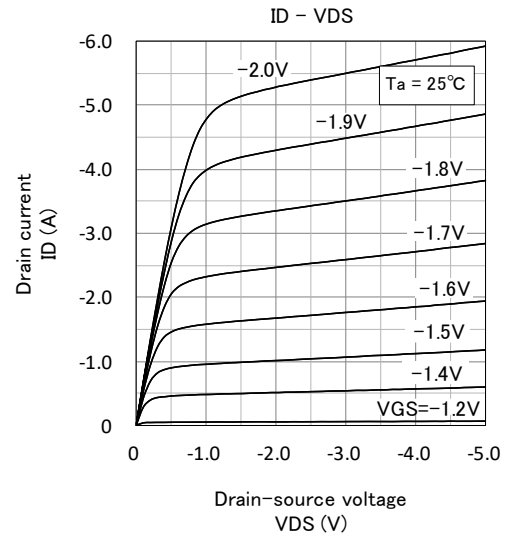
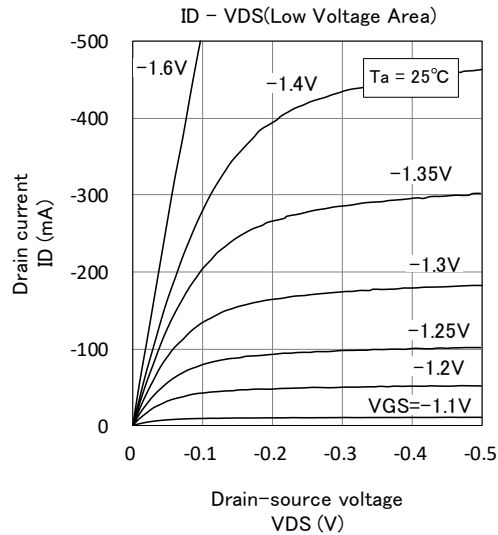
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TYPICAL CHARACTERISTICS

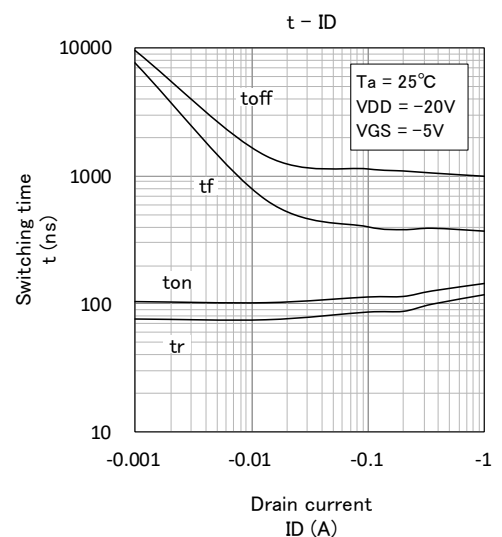
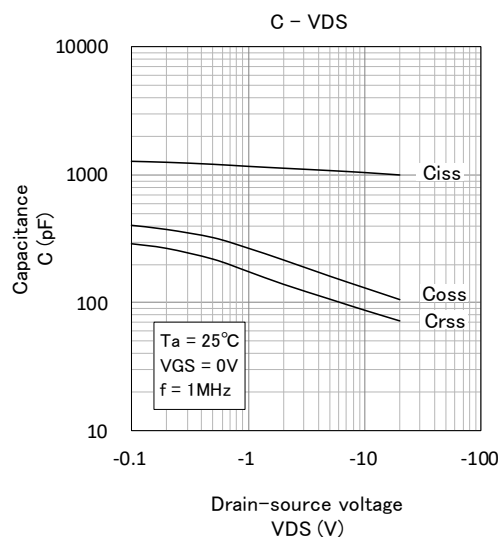
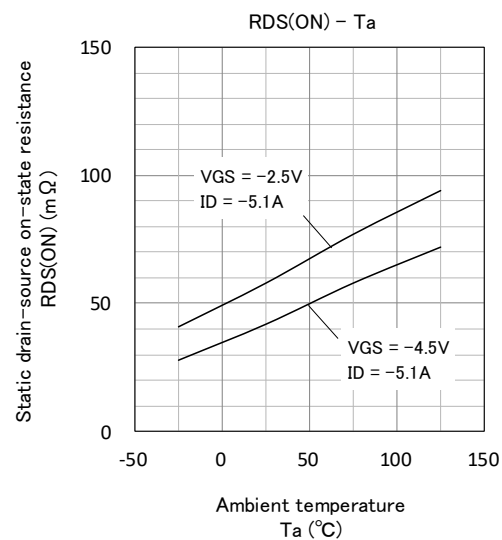
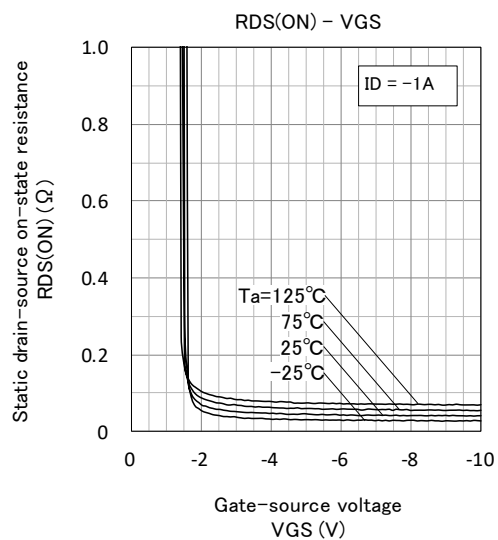
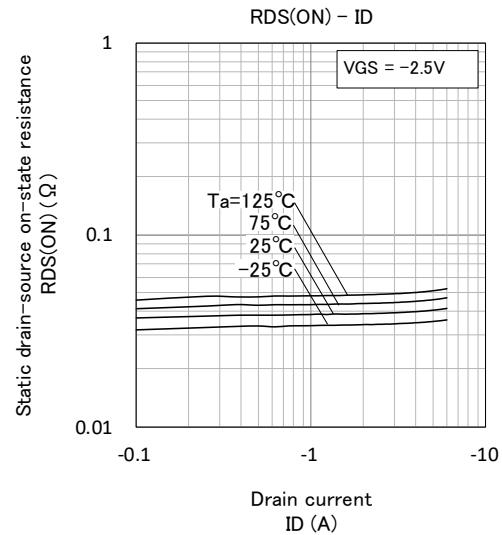
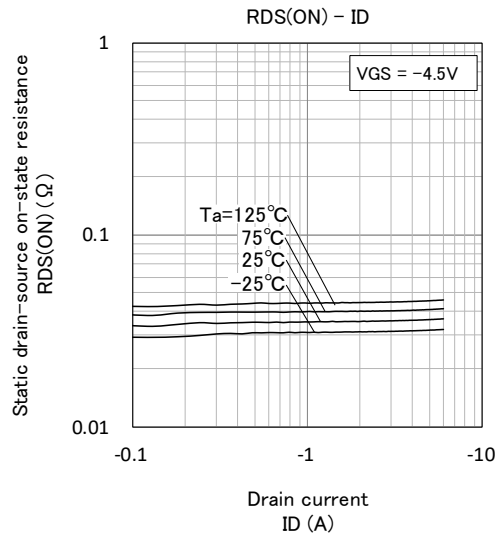


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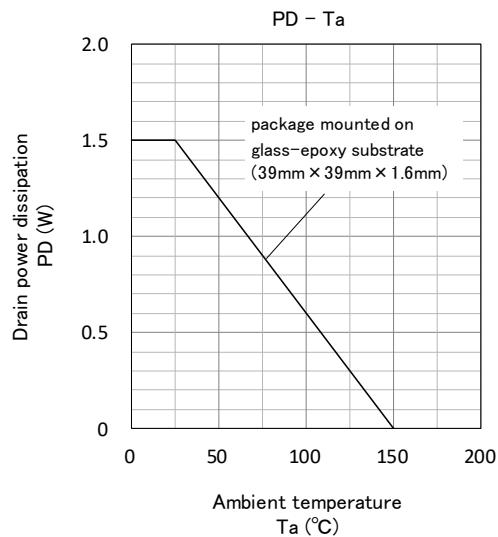
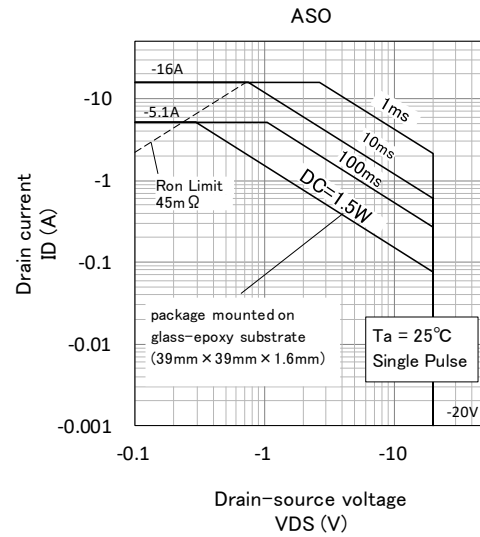
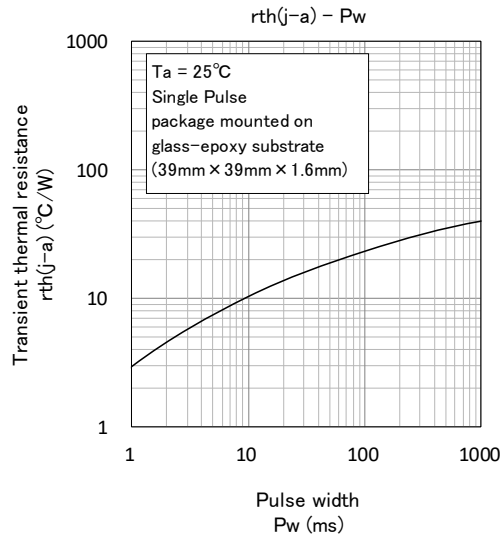


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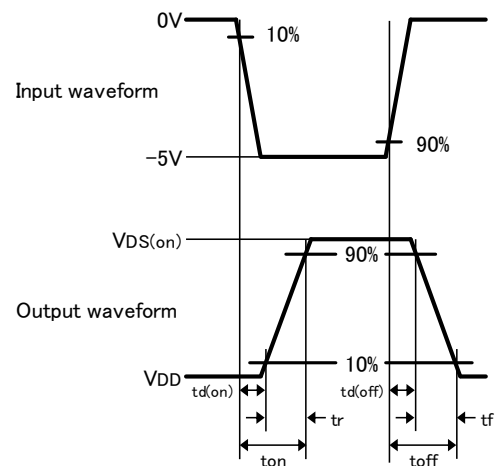
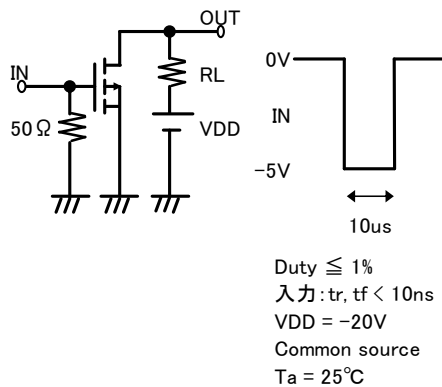
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Switching time test condition



Keep safety first in your circuit designs!

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