

VEC2301



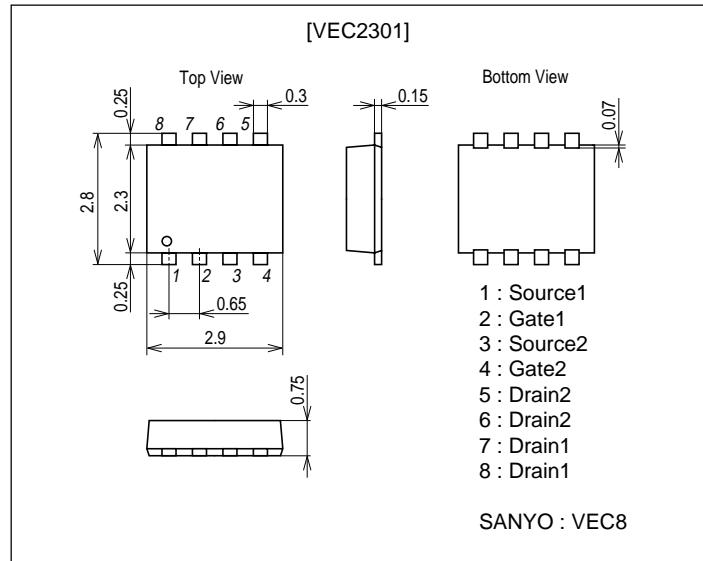
General-Purpose Switching Device Applications

Features

- Best suited for load switches.
- Low ON-resistance.
- 2.5V drive.
- Composite type, facilitating high-density mounting.
- Mount height 0.75mm

Package Dimensions

unit : mm
2227



Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		-20	V
Gate-to-Source Voltage	V _{GSS}		±10	V
Drain Current (DC)	I _D		-3	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	-12	A
Allowable Power Dissipation	P _D	Mounted on a ceramic board (900mm ² X0.8mm)1unit	0.9	W
Total Dissipation	P _T	Mounted on a ceramic board (900mm ² X0.8mm)	1.0	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V _{(BR)DSS}	I _D =-1mA, V _{GS} =0	-20			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =-20V, V _{GS} =0			-1	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±8V, V _{DS} =0			±10	μA

Marking : BA

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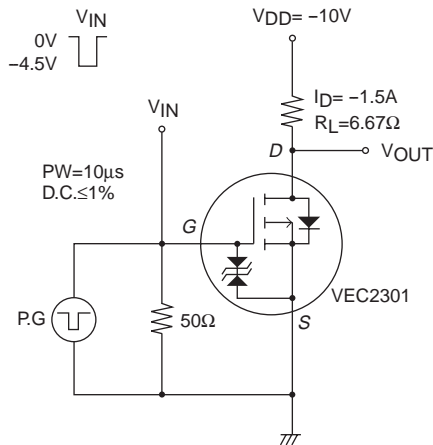
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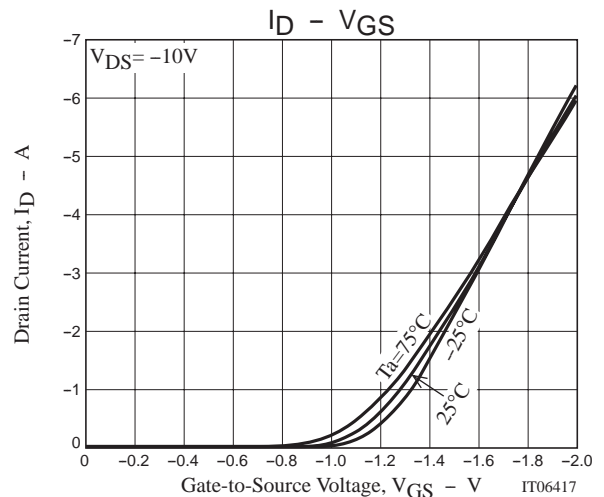
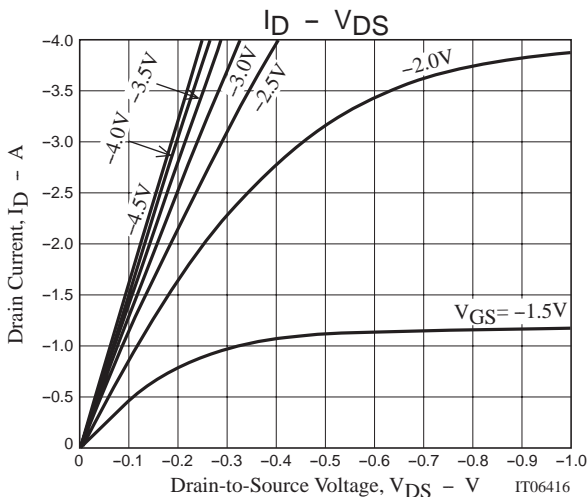
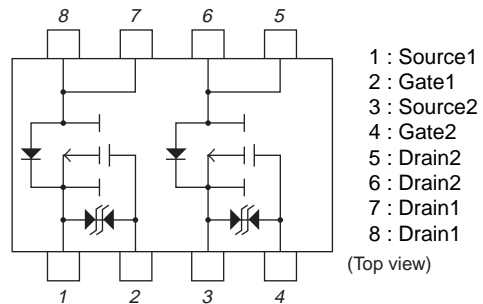
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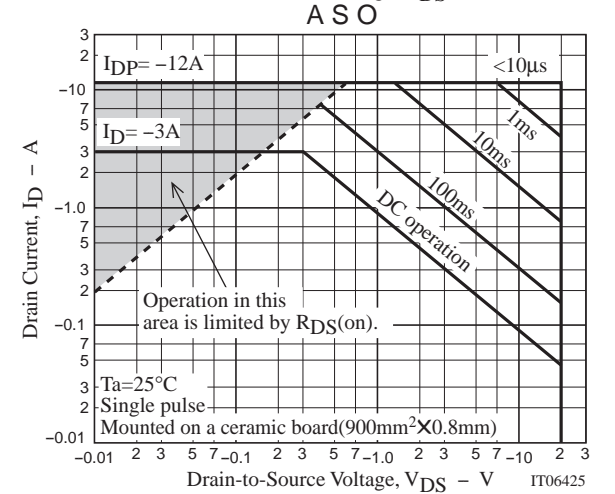
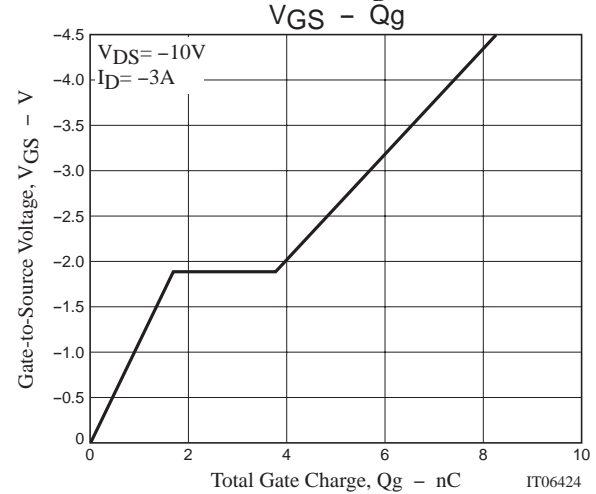
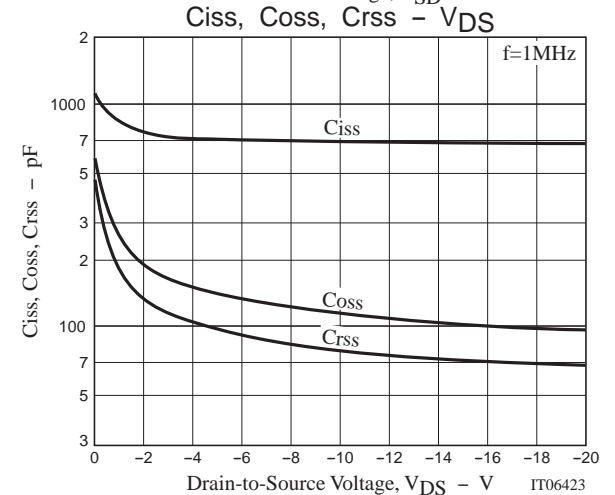
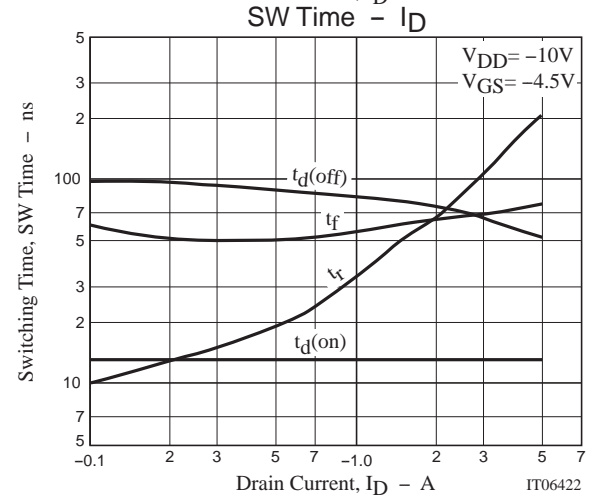
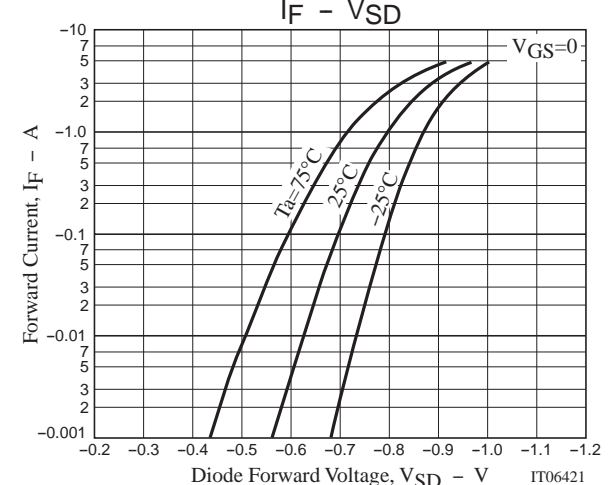
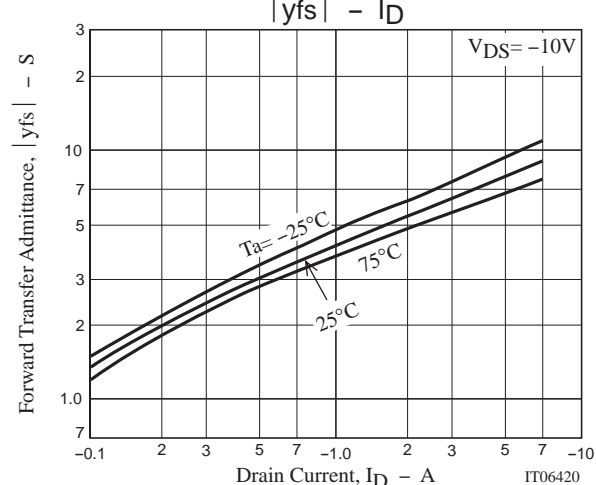
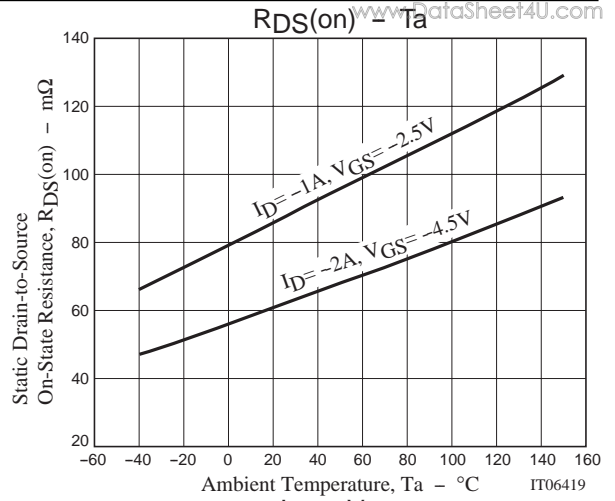
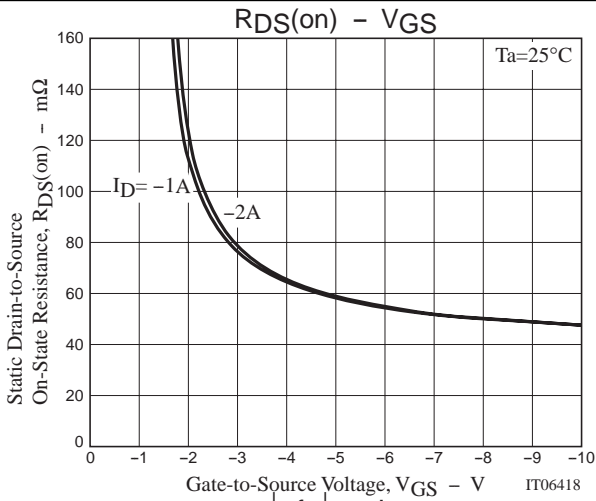
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=-10V, I_D=-1mA$	-0.4		-1.3	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=-10V, I_D=-1.5A$	2.9	4.9		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=-2A, V_{GS}=-4.5V$		62	81	$m\Omega$
	$R_{DS(on)2}$	$I_D=-1A, V_{GS}=-2.5V$		87	120	$m\Omega$
Input Capacitance	C_{iss}	$V_{DS}=-10V, f=1MHz$		680		pF
Output Capacitance	C_{oss}	$V_{DS}=-10V, f=1MHz$		115		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=-10V, f=1MHz$		80		pF
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit.		13		ns
Rise Time	t_r	See specified Test Circuit.		53		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit.		77		ns
Fall Time	t_f	See specified Test Circuit.		62		ns
Total Gate Charge	Q_g	$V_{DS}=-10V, V_{GS}=-4.5V, I_D=-3A$		8.2		nC
Gate-to-Source Charge	Q_{gs}	$V_{DS}=-10V, V_{GS}=-4.5V, I_D=-3A$		1.7		nC
Gate-to-Drain "Miller" Charge	Q_{gd}	$V_{DS}=-10V, V_{GS}=-4.5V, I_D=-3A$		2.1		nC
Diode Forward Voltage	V_{SD}	$I_S=-3A, V_{GS}=0$		-0.88	-1.2	V

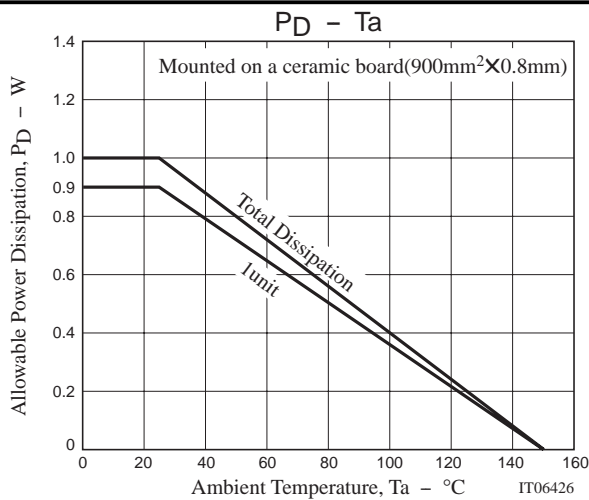
Switching Time Test Circuit



Electrical Connection







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