



Load Switching Applications

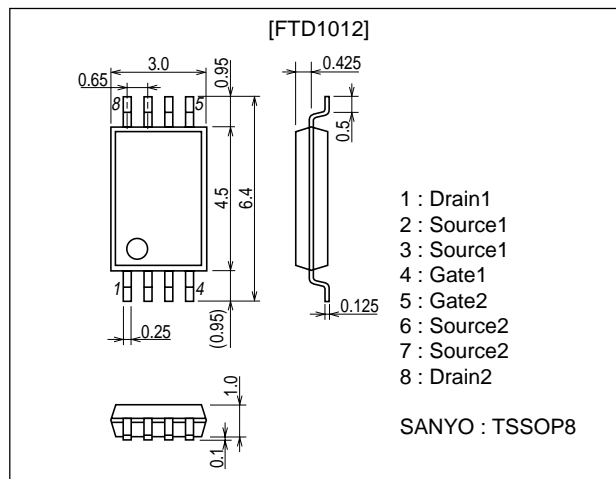
Features

- Low ON-resistance.
- 4V drive.
- Mounting height 1.1mm.
- Composite type, facilitating high-density mounting.

Package Dimensions

unit : mm

2155A



Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		-30	V
Gate-to-Source Voltage	V_{GSS}		± 20	V
Drain Current (DC)	I_D		-3	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu s$, duty cycle $\leq 1\%$	-15	A
Allowable Power Dissipation	P_D	Mounted on a ceramic board (1000mm ² X0.8mm) 1unit	0.8	W
Total Dissipation	P_T	Mounted on a ceramic board (1000mm 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	$V_{(BR)DSS}$	$I_D = -1mA$, $V_{GS} = 0$	-30			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -30V$, $V_{GS} = 0$			-1	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 16V$, $V_{DS} = 0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = -10V$, $I_D = -1mA$	-1.0		-2.4	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = -10V$, $I_D = -3A$	3.8	5.5		S

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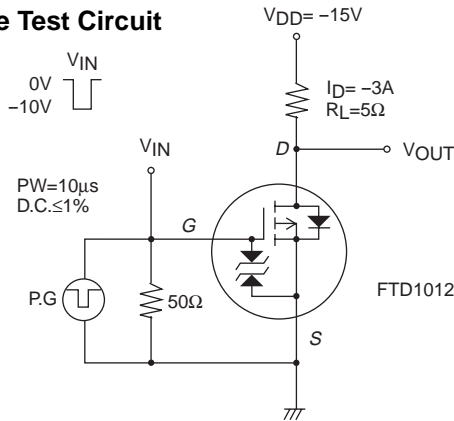
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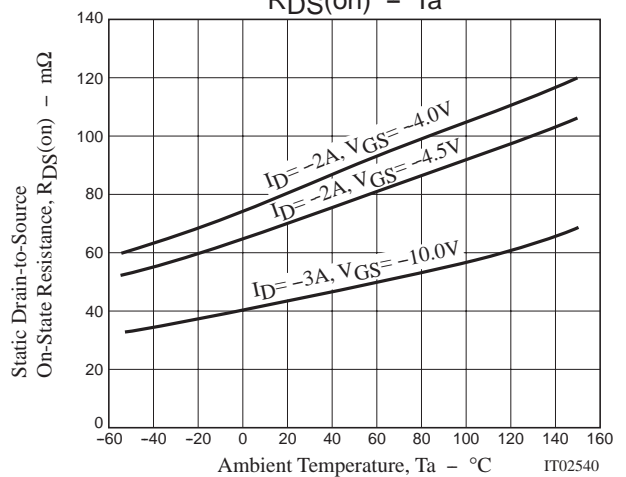
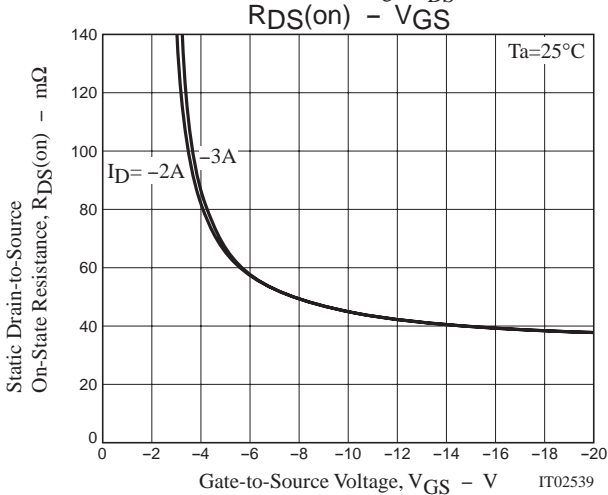
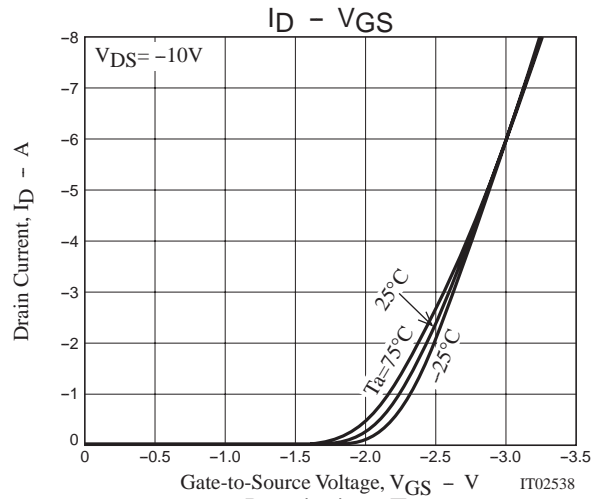
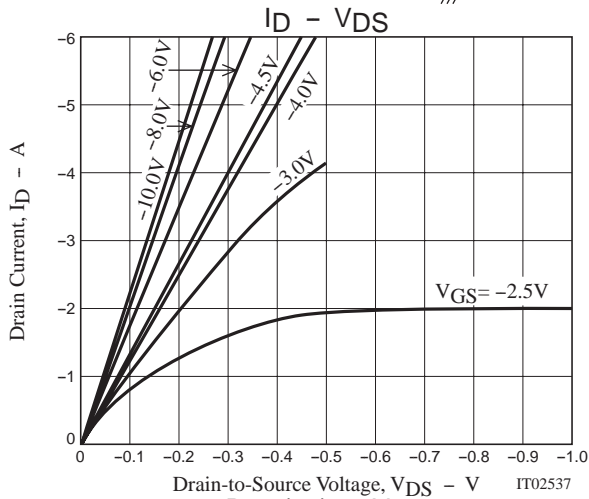
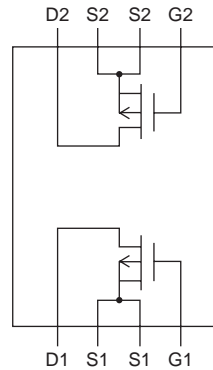
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Static Drain-to-Source On-State Resistance	R _{DS(on) 1}	I _D =-3A, V _{GS} =-10V		50	65	mΩ
	R _{DS(on) 2}	I _D =-2A, V _{GS} =-4.5V		80	110	mΩ
	R _{DS(on) 3}	I _D =-2A, V _{GS} =-4V		85	120	mΩ
Input Capacitance	C _{iss}	V _{DS} =-10V, f=1MHz		1000		pF
Output Capacitance	C _{oss}	V _{DS} =-10V, f=1MHz		250		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =-10V, f=1MHz		160		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit		10		ns
Rise Time	t _r	See specified Test Circuit		30		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit		55		ns
Fall Time	t _f	See specified Test Circuit		50		ns
Total Gate Charge	Q _g	V _{DS} =-10V, V _{GS} =-10V, I _D =-3A		19		nC
Gate-to-Source Charge	Q _{gs}	V _{DS} =-10V, V _{GS} =-10V, I _D =-3A		2		nC
Gate-to-Drain "Miller" Charge	Q _{gd}	V _{DS} =-10V, V _{GS} =-10V, I _D =-3A		4		nC
Diode Forward Voltage	V _{SD}	I _S =-3A, V _{GS} =0		-1.0	-1.5	V

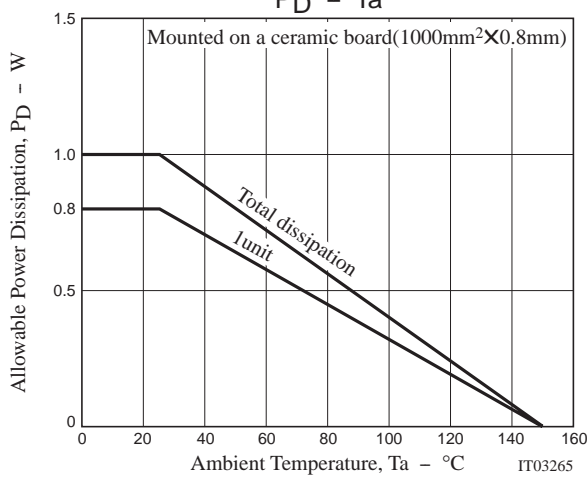
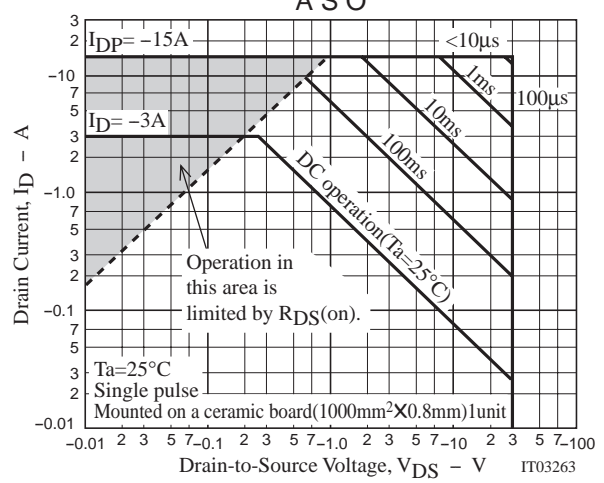
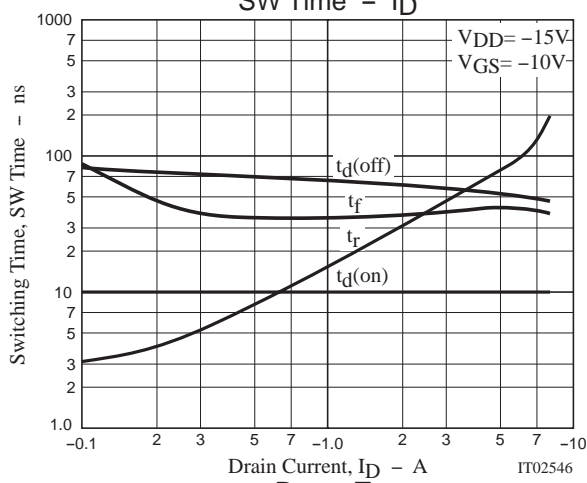
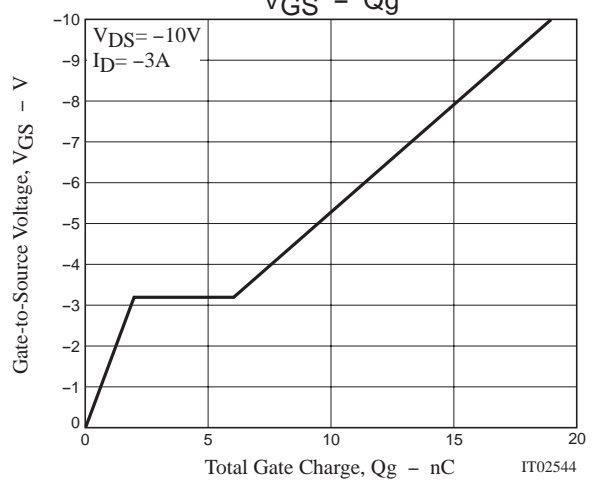
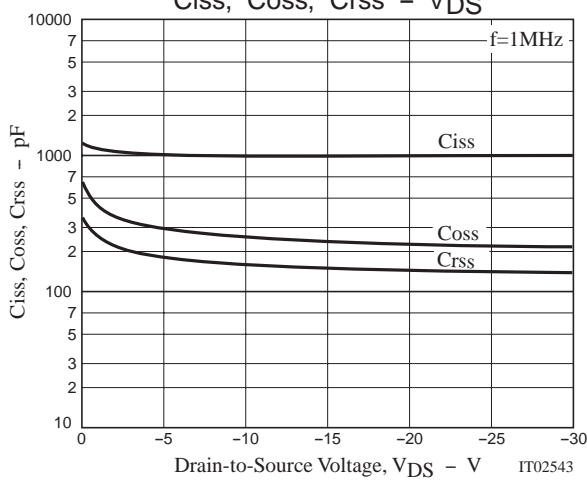
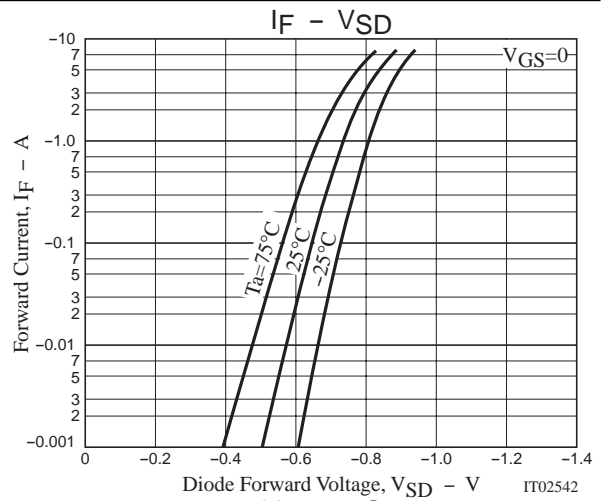
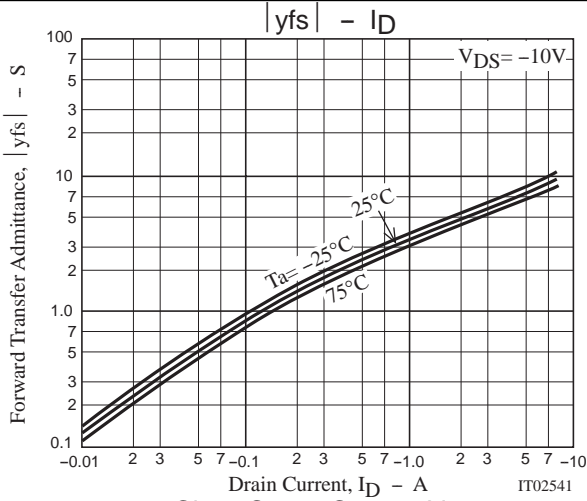
Switching Time Test Circuit



Electrical Connection



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